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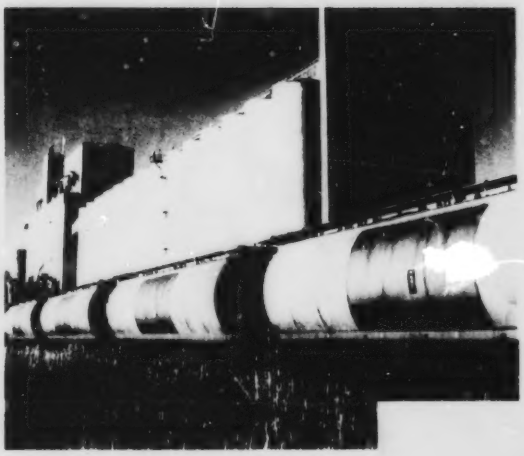
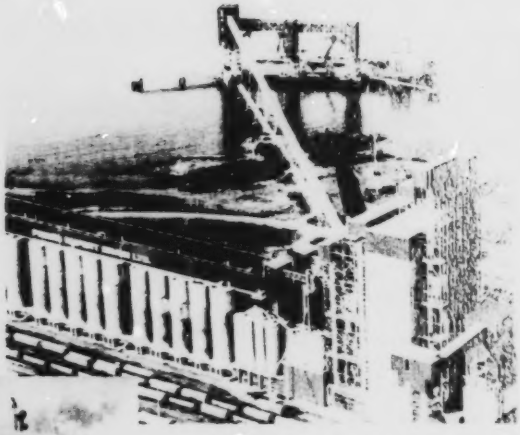
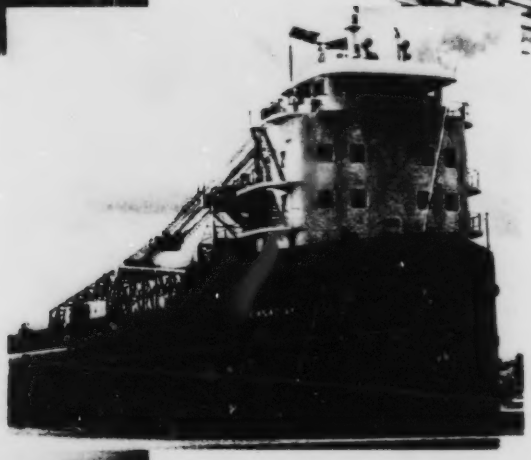
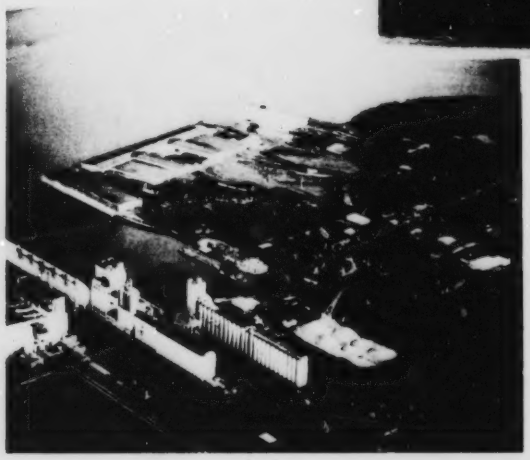
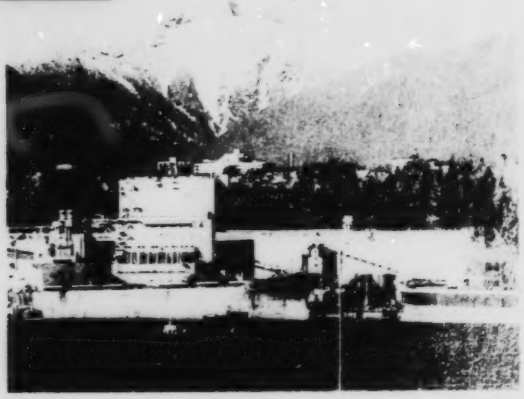
PORTS TASK FORCE REPORT











SEPTEMBER 1999

Canada

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FOREWORD

I would like to extend my appreciation to all those industry stakeholders who have taken time from their busy summer season and multiplicity of activities and other obligations to participate with us in this review of grain handling issues in our ports. The visits and the discussions have, I believe, been most helpful and informative.

I have been impressed with the positive attitude of ports stakeholders, and the generally realistic recognition of market constraints. I have also been encouraged by the willingness of participants to take a proactive role.

I believe that the grain industry, from producers to ports, recognize the strategic importance of maintaining choices for shippers. The industry, and indeed Canada as a whole, is well served by retaining export options.

This report does not represent the final word on any of the issues facing grain transportation and handling as it relates to our ports and waterways. I see this as an ongoing process of dialogue and discussion. In the coming months we will be releasing a study of port competitiveness vis-à-vis US route options. In addition, the recommendations of Mr. Kroeger will need to be considered together with the findings of the Ports Task Force as the country charts a course towards a new, more commercial grain transportation and handling system.

Margaret Bloodworth
Deputy Minister
Transport Canada

EXECUTIVE SUMMARY

Introduction

In order to progress on Justice Estey's vision of a more commercially-oriented, contract based grain handling and transportation system, the Minister of Transport announced the formation of a Ports Task Force on June 22, 1999, headed by the Deputy Minister of Transport, to address Justice Estey's recommendation which dealt with Ports and Waterways.

The mandate of the Ports Task Force was to work with key port stakeholders in a consultative process to address the issues raised by the Estey Review regarding matters of strategic importance to the ports of Churchill, Prince Rupert, Vancouver and Thunder Bay, and to other stakeholders with marine interests which are affected by the transportation and handling of Western grain. Issues regarding maintenance of competitive Canadian options for shippers as well as the continuity of supply of grain to these ports were also to be reviewed.

This report from the Transport Canada Special Ports Task Force summarizes the opinions and positions of key stakeholders regarding the critical issues and impediments to the maintenance of viable and healthy facilities at Canada's western grain ports. The report also presents key findings of the Task Force in response to the issues raised by the port stakeholders. We anticipate that as Transport Canada and industry stakeholders consider the challenges raised in this report, together with the recommendations from the Kroeger process, we will be able to move our grain transportation and handling system into the next century on a more efficient, more competitive and more commercial basis.

Traffic Patterns

A significant issue facing our grain ports is the current reduction in grain export volumes. This is further pronounced, for certain ports, by a shift in directional movements. Grain traffic patterns in Western Canada have undergone significant shifts in recent years which have resulted in Thunder Bay's portion of western grain movement falling to just over half the level it was 15 years ago. At the same time, grain handled in the West Coast ports has risen from just over 43% 15 years ago, to between 55% and 60% of total export grain in the past 10 years. There has also been a dramatic increase in the direct exports to the U.S., which have risen from 50,000 to 60,000 tonnes per year, to over three million tonnes per year during this period.

These shifts are driven by current market demands for Canada's grain, which result in the majority of shipments traveling west and being handled by the Ports of Vancouver and Prince Rupert. Considering the average annual proportion of movement from just the four western grain ports over the past ten years, 64% of grain shipped has been handled by the West Coast ports. Thunder Bay has shipped nearly 35%, while Churchill has handled just over one percent.

These changes in export and handling patterns have resulted in under utilized capacity at the ports of Prince Rupert, Thunder Bay and Churchill, while the Port of Vancouver has suffered congestion. It was partially with an eye to finding market solutions to these challenges that this Task Force began its work.

Port Challenges

Vancouver

Port Vancouver, Canada's largest port, is a dynamic, successful intermodal port handling almost 72 million tonnes of cargo in 1998. Its strengths include strong commercial relationships, growing container capacity and sophisticated grain terminals with capacity to handle a remarkable number of different grades of grain and direct hit/specialized handling capabilities.

Congestion of traffic in the BC lower mainland and the complexity of relationships and delivery requirements for grain, present significant operating problems and a loss of capacity in the Port of Vancouver. Vancouver has suffered from congestion, capacity constraints, the demands of multiple grades of grain, less than optimal information management and logistics between modes, and repeated labour unrest. When operational disruptions substantially decrease the flow of grain to Vancouver, waiting vessels and demurrage accumulate. The density of residential and commercial development in the Vancouver area makes expansion of existing facilities less likely.

A relatively high tax burden which stakeholders feel places the port at a disadvantage vis-à-vis US northwest ports is a further irritant. Lower capital investment charges and local taxation advantages enjoyed by Pacific Northwest ports provide an incentive for investment in facilities that may attract Western Canadian bulk commodity exports.

Labour disruptions have had a highly visible impact on Vancouver throughput. When the system either slows or shuts down due to industrial action, the resulting backlog of ships waiting for grain accumulates significant demurrage bills, which eventually reduce Western farmers' incomes.

The shift to cost recovery for marine service fees is an irritant to system participants. Parties complain that they are paying high taxes and are now being asked to pick up these additional fees. They argue that there is no mechanism from the marketplace to provide adjustments to the marine service fees to reflect the cycles in commodity markets, such as grain and coal, which are currently depressed.

Prince Rupert

Justice Estey recommended that "*...an extensive and serious program must be launched some day to find the solution to the problems surrounding the operation of the Port of Prince Rupert.*"

Prince Rupert Grain is a modern, efficient facility capable of handling up to 6 million tonnes of grain per annum. However, a number of factors result in the Prince Rupert Grain terminal serving as a residual facility. The joint ownership structure, where the five owners each own terminal facilities in Vancouver Harbour, the high debt servicing

costs, and the distance based freight rates all contribute to create disincentives to fuller utilization of this facility. It is understandable that individual stakeholders would want to maximize their own returns without considering the overall impact on the port and the region, but this situation must be viewed in light of the economic development of the community and region.

Property taxation levels, lease costs and marine service fees also place a burden on the operation of the grain terminal at Prince Rupert.

Thunder Bay/Seaway

Shifting markets, which have resulted in a significant decline in the volume of grain flowing from the prairie to Thunder Bay for furtherance to eastern transfer elevators or export markets, is seen as the greatest threat to the Port. In calendar year 1998, only 7.44 million tonnes moved through Thunder Bay. Although it is difficult to determine with certainty, Port interests estimated that 8 to 10 million tonnes per year would be the minimum level of grain needed by Thunder Bay terminals to continue operations without further consolidation.

Declining demand has resulted in a significant permanent reduction in the number of lake vessels for handling grain. If demand continues to fall, more vessels will be removed from the fleet, making it difficult for Thunder Bay and the Seaway to respond to future surges in volume. The increasing shift to short-term accountability by system participants also makes players reluctant to enter into long-term commitments for lake freight. This forces vessel owners to look for other opportunities for their assets. If this trend continues, vessel owners will be less likely to have boats available for grain, especially during the peak demand periods.

Great Lakes shipping interests have expressed concerns with rail freight rates offered into Eastern Canada on through-shipments. From the prairie midpoint to Thunder Bay the rate is $34.45 per tonne. From Thunder Bay to Quebec, a greater distance, the railways are apparently charging $18 per tonne. (Note that the Thunder Bay catchment area is primarily further east than the prairie midpoint, with corresponding lower freight rates per tonne, e.g. Weyburn, a distance of 764 miles, has a rate of $27.31 per tonne.) While shippers want freedom of choice, including choice of carriers, Seaway interests feel that it is important to implement a distribution system based on fair market rules. In response, the railways point to significant efficiency gains which they have made, the relatively higher cost of the origination portion on branchlines, as well as the logistical efficiencies directly associated with unit train shipments railed from the prairies directly to the lower St. Lawrence.

The terminal managers expressed dissatisfaction with the level of service received from both CN and CP Rail at Thunder Bay. They feel the service has declined significantly with cuts to railway crews and yard assignments. The information exchange between the participants and modes concerning rail and vessel arrivals is also felt to be insufficient.

The high level of municipal taxation is a major issue for Thunder Bay operators who feel that the terminals pay a disproportionate portion of city taxes. Cost recovery and user pay policies have also resulted in an increase in Port Authority and marine service costs.

Churchill

Maintaining a consistent supply of grain is seen as the most important factor in ensuring the future of the Port of Churchill. Port interests indicate that one million tonnes are required annually to ensure continued survival of, and reinvestment in, the grain port, although this level has not previously been achieved. They point out that the savings to Atlantic Rim destinations are estimated to be $20-23 per tonne due to the lowest freight rate for producers, the lowest elevation tariffs and advantageous shipping rates.

A major impediment to the Town of Churchill, and further investment in facilities there, has been the uncertainty hanging over the future of the Port and rail line. The difficulty in diversifying commodities using the Port further hamper the Port's ability to prosper. OmniTRAX, the new owner of the Hudson Bay Port Company and the Hudson Bay Railway, has implemented an aggressive marketing plan to promote the Hudson Bay route.

Currently $200 million worth of goods and services flow from Western provinces through Churchill en route to northern communities, most of which arrives by rail. The Hudson Bay Railway is important to this "re-supply" business and a consistent grain supply is considered fundamental to the survival of the rail line.

OmniTRAX, assisted by the federal and provincial governments, has been encouraging the international insurance industry to ease the insurance restrictions and surcharges placed on shipments in and out of Churchill.

The perceived bias by the grain companies against Churchill was expressed as a concern. Although grain companies claim that market forces compel them to ship elsewhere, advocates of the Port feel that Churchill has a substantial structural disadvantage due to the grain companies' ownership of facilities at other ports. All grain currently shipped through Churchill is Canadian Wheat Board Grain. Churchill interests also feel that the branch line abandonment process threatens the Churchill catchment area.

Conclusions

General

1. It is important for grain shippers to retain market choices and have options during periods of growth. Canada needs all four of the western grain ports mentioned by Justice Estey. However, the modal choice should be maintained and based on fair commercial rules.

2. There is sufficient handling capacity at each of the key grain ports.

3. The challenge is to incorporate sufficient commercial signals into the grain logistics and handling system to drive efficiency gains. Better use of the infrastructure allows producers to pay lower costs for transportation.

4. A more commercial grain transportation and handling system may help to promote new alliances within the system, while, at the same time, the Canadian Wheat Board's (CWB) strong marketing role should ensure it can continue to facilitate shipments through less diversified and financially mature ports such as Churchill and Prince Rupert.

5. It is important for employees of port terminals and carrier employees to enter into a true partnership to make the Canadian system not only more efficient and competitive, but more stable and reliable in order to better serve the buyers of our export grain as well as Western Canadian producers.

Competition

6. The concern that rail rates offered to Quebec ports are relatively low compared to the regulated rates to Thunder Bay was expressed by a number of stakeholders. While possibly an example of modal competition, it may require monitoring and, if necessary, could be raised in the context of the review of the *Canada Transportation Act*.

7. Full or partial closure of a port like Prince Rupert presents an economic development challenge to the entire region, with a transfer of social costs, including taxation, to other users of the infrastructure and services. While individual stakeholders may be prepared to compromise, no action will be forthcoming unless it is clear that other stakeholders are also 'sharing the pain' and will compromise on solutions which would see greater use of this excellent facility. We urge stakeholders in Prince Rupert to work together for the development of the region and the country, rather than simply for the protection of specific commercial interests.

Competitiveness With US Ports

8. Transport Canada has commissioned a study of the competitiveness of US and Canadian grain ports, which will provide useful information on whether the approach followed in Canada could place our ports at a competitive disadvantage.

Taxation

9. We note the willingness of various local jurisdictions to reconsider the taxation burden on these ports and their facilities. We encourage all parties to carefully review these issues to determine whether the current rates of taxation are sustainable.

Impact on Other Trades

10. In many port regions, grain movements represent the backbone of the trade activities. Lower volumes or port closure have substantive impact on other trades such as coal and iron ore, resulting in a global weakening of the transportation options in the region.

Gateways and Corridors

11. Our grain ports should continue to develop and participate in mechanisms for partnerships in improving port efficiency and productivity and in marketing the advantages of specific port regimes. The Task Force notes the positive influence of stakeholders' groups such as gateway councils and promotion initiatives in advancing the development and growth of our port regions. Gateway councils and port promotion initiatives could play a role in providing adequate follow-up on many key challenges identified during the summer review.

Marine Service Fees

12. The Ports Task Force notes that the Canadian Transportation Agency has just concluded a review of the marine pilotage system. The Minister of Transport will be reviewing and responding in a report to Parliament which should be tabled in early November, 1999.

13. The Treasury Board Secretariat also announced that it will undertake a comprehensive review of marine service fees, including Coast Guard fees for vessels transporting bulk commodities. Transport Canada is monitoring this review.

14. In the meantime, the implementation of the port and marine reforms undertaken by Transport Canada under the *Canada Marine Act* to reduce the bureaucratic burden on ports continues to facilitate the development and delivery of efficient marine services in Canada.

Accountability

15. Increased levels of accountability in the grain transportation and handling system will aid in the resolution of many existing problems.

Information Exchange

16. The increased use and application of current information technology among participants in the grain handling and transportation system could facilitate better coordination of grain from country position to port and onto export ships.

Vancouver

Congestion

17. Consolidation of the country handling system and increased shipments of unit trains of clean grain to port position, coupled with reforms which improve the market signals and the capacity of stakeholders to utilize information technology to share logistics information, will respond to these challenges and result in reduced congestion. These reforms are largely under way, and the regulatory system must now catch up to the reforms.

Port Railway Service

18. The Ports Task Force encourages the stakeholders at Vancouver to give the existing relationships a chance to work effectively in a more commercial system. If this is found to be unsuccessful, the partners may wish to consider the possibility of a terminal railway to take over joint rail operations at Vancouver and service terminals.

Labour

19. Recent amendments to the *Canada Labour Code* prevent the long-shore and tugboat industries from refusing to service grain ships. However, all stakeholders on the West Coast will need to consider themselves partners in developing sustainable commercial relationships which do not hurt the reputation of our West Coast ports, nor unfairly penalize the grain producers. It is important for employees of port terminals and carrier employees to enter into a true partnership to make the Canadian system not only more efficient and competitive, but more stable and reliable.

Taxation

20. The Ports Task Force commends the Greater Vancouver Gateway Council for the comparative work that it is doing in this area, and notes positive indications that the municipal level of government has indicated it is willing to review this issue closely.

Greater Vancouver Gateway Council

21. The Task Force was impressed with the work of the Gateway Council, and in particular, its potential as a model for similar multi-sectoral councils which could be encouraged and supported for the other port regions.

Thunder Bay/Seaway

Low Volumes

22. The declining volume of grain, flowing from the prairie to Thunder Bay for furtherance to eastern transfer elevators or export markets, is the greatest threat to the Port. Seaway interests, working together under a 'Seaway Corridor' umbrella, will need to work effectively to assist in the development of new markets which can be serviced through the Seaway.

23. Increased flexibility to negotiate more attractive port-specific transactions, possibly under a revenue cap, would enable Seaway transportation partners to offer competitive prices. The Stakeholders' Report of the Kroeger Process addresses these issues.

24. If the Canadian Wheat Board and non-Board marketers, working with customers, are able to continue to determine port of exit, then flexibility should enable Seaway transportation partners to price themselves into the transportation chain.

Port Railway Service

25. The Ports Task Force encourages the stakeholders at Thunder Bay Port to give the existing relationships a chance to work effectively in a more commercial system. If this is found to be unsuccessful, the partners may wish to consider the possibility of a terminal railway to take over joint rail operations at Thunder Bay and service terminals.

Reduction in Laker Fleet

26. We believe that there remains an important role for the Seaway bulker fleet in the North American economy, although the fleet may consolidate further.

27. Grain shippers must consider their long-term strategic options. It would not be in the best interests of any shippers to lose the bulker fleet entirely.

Taxation

28. Taxation is a major concern in Thunder Bay. All parties will need to view themselves as partners in the Thunder Bay/Seaway route, and governments at all levels should be facilitators in establishing competitive gateways rather than viewing transportation infrastructure as simply another source of revenue.

Seaway Corridor/Gateway Council

29. Stakeholders could consider uniting, perhaps under the umbrella of the Seaway Corporation, to coordinate their efforts to develop and promote the Seaway corridor.

Prince Rupert

Regional Development

30. In any consideration of the transportation challenges facing Prince Rupert, the role of that infrastructure in regional economic development must be taken into account.

31. In the interests of the region, town and the communities which depend on the rail link, the Ports Task Force urges the stakeholders to work together for the development of the region and the country, rather than simply for the protection of specific commercial interests.

Ownership Structure and Debt Servicing

32. The disadvantages faced by Prince Rupert Grain are complicated by complex business relationships. The underutilization of the grain terminal appears to be contrary to the interests of prairie farmers, northern BC, Prince Rupert and Canada.

33. It is important for the grain companies, the debt holder, and other interested stakeholders to discuss appropriate incentives leading to more consistent use of the facility. The principal owners of Prince Rupert Grain Ltd. and the Government of Alberta may have an interest in developing potential mechanisms within the current agreement to ensure that the appropriate incentives for the users to promote fuller utilization of this strategic facility are in place.

Rail Freight Rates

34. In a more commercial system which provides some flexibility to move away from a strictly mileage based rate, there will be more scope to reduce the rate and to negotiate deals which take account of the many efficiencies which Prince Rupert Grain has to offer. Incentives can be offered, and have been offered in the past.

Taxation

35. The Ports Task Force commends the city for the cooperation it has shown in reassessments. All parties will need to view themselves as partners in the Northwest Corridor, and work together to reduce the various fees and tax burden on the facility.

Full Utilization of Prince Rupert Grain

36. If Prince Rupert's logistical advantages are reflected in marketing under a more commercial system Prince Rupert Grain may achieve a significantly higher level of utilization.

Northwest Corridor Development Corporation

37. The Task Force recognizes the excellent work carried out to date by the Northwest Corridor Development Corporation. This public/private partnership should be encouraged and supported by all stakeholders to continue to promote the Northwest Corridor. By bringing various stakeholders together to discuss corridor promotion and to find solutions to challenges, the Northwest Corridor Development Corporation can be a significant force for positive change in the northern region. Transport Canada will continue to play a positive role in assisting the Corporation in development and promotion of the Northwest Corridor.

Churchill

Consistent Supply of Grain

38. Maintaining a consistent supply of grain is widely seen as the most important factor in ensuring the future of the Port of Churchill. Although advocates of the Port argue that it is a significantly cheaper route to Atlantic destinations than other options, shippers have not provided the port with significant volumes.

39. The reforms being proposed in the Stakeholders' Report of the Kroeger Process would enable Canadian Wheat Board and non-Board marketers, working with customers, to continue to determine port of exit. While direction of export will still be determined to a large degree by markets, the Canadian Wheat Board's (CWB) strong marketing role should ensure it can continue to facilitate shipments through ports such as Churchill. Non Canadian Wheat Board shippers are encouraged to utilize the capacity of the Port.

Uncertainty

40. A major impediment to Churchill's success has been the uncertainty hanging over the future of the Port and rail line. With assurances that the system will be there, investment should grow.

41. Considering the recent transfer of the line and port operations to a private operator, the government should not now undertake changes which would unduly threaten the investment which the new operator has made in the rail and port infrastructure. It would not be realistic for an entire northern region to be totally at the mercy of market cycles. On the other hand, over the medium term, markets should determine the optimal level of capacity offered.

42. The Task Force commends OmniTRAX/Hudson Bay Port Corporation/Hudson Bay Railway for their marketing efforts to develop new and expanded business for the Port, and encourages the operator to continue and intensify these efforts, including non-agriculture exports and two-way trade. It is through increased sales and volumes, diversification and cost competitiveness that the Port of Churchill can develop a secure future.

Marine Insurance

43. The federal government will continue to assist OmniTRAX in its efforts to encourage the international insurance industry to ease the insurance restrictions and surcharges placed on shipments in and out of Churchill.

Commercial Relationships

44. OmniTRAX should further strengthen its commercial relationships in the various fora in which the industry operates, such as the Western Grain Elevators Association, the Car Allocation Policy Group and the Railway Association of Canada. Strong commercial relationships will be increasingly important for niche market players and ports such as Churchill.

Corridor/Gateway Organization

45. The implementation of a Gateway Council/Corridor group to promote the development and utilization of the northern route remains a positive proposal for Churchill. Churchill would benefit from a proactive, industry led, gateway council, which could play an important role in changing the industry perceptions of Churchill.

GRAIN TRANSPORTATION REFORM
PORTS AND WATERWAYS

INTRODUCTION

In December 1998, Justice Willard Estey provided his final report of the Grain Handling and Transportation Review to the Minister of Transport. *Recommendation 1* of his report addressed ports and waterways:

> *"It is readily apparent that an extensive and serious program must be launched some day to find the solution to the problems surrounding the operation of the Port of Prince Rupert. The Port of Vancouver has serious burdens from sheer volume which impinge upon its capacity at peak periods. An alternative facility on our West Coast, even for crisis and backup purposes alone, requires some broad and comprehensive studies and negotiations between all of the parties concerned. It would appear to be a matter of strategic security to be aware that a significant portion of the Western Canadian grain harvest may find its way to Pacific facilities in the United States if Canada should fail to employ all its export facilities efficiently and on an economic basis.*
>
> *Having examined the plans for the Port of Churchill, all considerations indicate to this Review that national policy and planning should be based upon a recognition that this project appears to have a reasonable chance of commercial success. The Board has done all that it can do in its role in grain exporting to encourage the use of this facility.*
>
> *It is recommended that the federal government, in conjunction with the Seaway authority, work to encourage the utilization of the Seaway by two-way freight traffic into the North and South Atlantic region and the central regions of Canada and the United States. It is further recommended that the Board continue to make every effort to promote sales of Board grain to markets which can be economically served by the Seaway."*

In order to progress on Justice Estey's vision of a more commercially-oriented, contract based grain handling and transportation system, the Minister of Transport announced the formation of a Ports Task Force on June 22, 1999, headed by the Deputy Minister of Transport, to address Justice Estey's recommendation which dealt with Ports and Waterways.

The mandate of the Ports Task Force (see Annex I) was to work with key port stakeholders in a consultative process to address the issues raised by the Estey Review regarding matters of strategic importance to the ports of Churchill, Prince Rupert, Vancouver and Thunder Bay, and to other stakeholders with marine interests which are affected by the transportation and handling of Western grain. Issues regarding maintenance of competitive Canadian options for shippers as well as the continuity of supply of grain to these ports were also to be reviewed.

In order to accomplish its objective, the Ports Task Force, led by the Deputy Minister, met with all major stakeholders having an interest in the longer-term competitiveness of the four grain ports. The Ports Task Force conducted a series of meetings with key port stakeholders and sought their written views in order to assess their perceptions regarding the key strengths of each port and region as well as the challenges facing them.

The Task Force held consultations throughout Western Canada with more than 20 stakeholder interests. Additional meetings were held in Central Canada to address the interests of Seaway-based stakeholders. The Ports Task Force took the position early on that it would examine the Seaway in its entirety. The focus on Thunder Bay resulted not only from Justice Estey's recommendation, but also from the fact that as the western anchor of the Seaway, Thunder Bay acts as the spout for the flow of grain through the Seaway. These initial discussions were intended to identify the strengths of the port and waterway communities that are active in the grain trade and their assessments of the challenges that they face in building on those strengths.

Throughout all these contacts, the Ports Task Force encouraged the parties with which it met to expand on their oral representations with written comments. The Ports Task Force has consolidated the results of its direct discussions with these parties and evaluated additional written inputs that it received. In addition, Transport Canada has initiated a study of the competitive position of Canadian grain ports versus American options. This study will be undertaken during the coming months.

The following report to the Minister of Transport provides a background summary of the current port grain handling and transportation system, a review of some of the trends and developments in the trade of grain and grain products as it relates to Canadian ports and waterways, an analysis of the four western grain ports and the facilities of the St. Lawrence Seaway system, their effectiveness in meeting current and future demands, opinions of stakeholders as to the key factors and issues facing these ports and a summary of the key findings.

This document presents the findings of the special Ports Task Force. It was transmitted to the Minister of Transport on September 30, 1999. However, it is not the view of the Task Force that this report ends the process. Rather, this review has served to focus minds on a broad range of issues which affect our grain ports. It is anticipated that as Transport Canada and the industry stakeholders consider the challenges raised in this report, we will be able to move our grain transportation and handling system into the next century on a more efficient, more competitive and more commercial basis.

1. Guiding Principles

Regulatory reform in Canada has been aimed at making it easier for businesses to operate according to commercial principles, to eliminate/reduce red tape, to reduce overhead costs, to allow for faster business decisions, and to promote local participation in decision making. *The Canadian Transportation Act, 1995* (CTA) stated that a safe, economic, efficient and adequate network of viable and effective transportation services, making the best use of all available modes of transportation at the lowest cost, was essential to serve the needs of shippers and to maintain the economic well-being and growth of Canada and its regions. Those objectives are most likely to be achieved when all carriers are able to compete, both within and among the various modes of transportation, with market forces being the prime agents in providing viable and effective transportation services.

The CTA further states that regulation of carriers and modes of transportation should occur only in respect of service and regions where it is necessary to meet the needs of shippers and travelers, and that such regulation should not limit the ability of any carrier or mode to compete freely with any other carrier or mode. Transportation is also recognized as a key to regional development and the commercial viability of transportation links are balanced with regional economic development objectives so that the potential economic strength of each region may be realized.

Each carrier or mode of transportation, as far as is practicable, should bear a fair proportion of the real costs of the resources, facilities and service provided to that carrier or mode of transportation at public expense. Each carrier or mode, as far as is practicable, should also receive fair and reasonable compensation for the resources and services that it is required to provide as an imposed public duty. The CTA also requires that traffic move under fares, rates and conditions that do not constitute an unfair disadvantage to any other traffic beyond that which is inherent in location or volume of the traffic, scale of operation connected with the traffic or type of traffic or service. Fares, rates and conditions must present no undue obstacle to the mobility of persons, or to the interchange of commodities between points in Canada, nor should they result in the discouragement of development of primary or secondary industries, to export trade in or from any region of Canada or to the movement of commodities through Canadian ports.

The *Canada Marine Act* received Royal Assent in June of 1998 and provides Canada's ports with the tools to operate commercially and efficiently. It enables establishment of Canada Port Authorities (CPAs) for the purpose of operating the ports in respect of which letters patent are issued under the *Act*.

The CPAs are governed by a board of directors appointed in consultation with port users. They possess powers to engage in port activities for shipping, navigation, the transportation and handling of goods and passengers, and the handling and storage of goods. The CPAs are given crown land to operate and manage, but not to own. They have no recourse to the federal treasury. Port authority borrowing to support capital investments is obtained from private-sector lenders, based on the CPA's stream of future revenues. Each CPA pays an annual charge to the Crown based on a formula included in its letters patent. Surpluses at each port will not be distributed but may be re-invested in the port. Fees charged by the ports will have to cover costs and be fair

and reasonable. The ports set their own fee structures, but cannot unjustly discriminate among users of the port. They may differentiate in fees and services on the basis of volume or value of goods or on any basis that is generally acceptable.

Considerations upon which CPA applications are assessed are as follows: financial self-sufficiency; strategic significance to Canada's international and domestic trade; diversification of traffic; and, links to major highways and/or rail lines.

The Grain Handling and Transportation Review conducted by Justice Estey was guided by objectives of: ensuring an efficient, viable and effective transportation system to meet the long-term expectation and demands of all customers; maximizing system efficiency, competitiveness and capacity utilization for grain producers, shippers, carriers and ports; creating an environment for the establishment of clear and transparent roles, responsibilities and accountabilities for all system participants; and, creating a responsive and customer-oriented logistics system that is cost effective and able to promote necessary investments and adoption of best practices.

Our review of the Canadian grain ports has been guided by these principles. This report describes the background and history as well as the challenges facing our ports. All offer significant advantages and scope for efficiency gains.

M121

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BACKGROUND ON GRAIN PORTS

2. Trends and Investments

While only one element of the important transportation network, Canadian ports which transship grain for export are critically important to the industry. These ports play an active role in the intermodal transfer of grains and grain products, and in ensuring the continued competitiveness of Western Canadian producers in the world market.

Terminology

Exports/Shipments *- throughout this report, reference is made to grain exports, grain shipments and grain movement. When discussing grain handling and transportation statistics, the terms shipment and movement are used to capture all prairie grain including that which is used domestically (usually shipped via the eastern Seaway system) as well as that which is exported.*

Unit trains *- multiple car block (26, 52 or 102) originations from one country point and destined to one port.*

Direct hit *– a unit train of a single grain and grade of grain (usually clean) destined for one vessel and intended for direct loading to the vessel without elevation, cleaning or storage in terminal elevator.*

Soft-handle *– facility to gently handle and load to a vessel with minimal damage "fragile" commodities such as peas, which can shatter.*

Licensed Storage Capacity *– as per the Canada Grain Act, the Canadian Grain Commission issues licenses for the operation of elevators (primary, terminal, transfer and process). The CGC records the grain storage capacity for each facility as indicated by the elevator operator.*

Elevator Working Space *– due to the number of grains and grades of products handled by terminal elevators, the effective working space is somewhat less than the licensed capacity.*

Pooling *– in order to increase the efficiency of grain delivery to terminal elevators, a proportional distribution of cars with Canadian Wheat Board grains is made, based on origination, and documentation is sorted out afterward. This avoids having to deliver each individual car originated by a specific company to that company's terminal elevator.*

Ocean-Going Vessels *– Bulk cargo vessels used for ocean-going grain shipments are classified by carrying capacity in dead weight tonnes (DWT) and sea-trade lane. The general classifications are "Handysize" vessels (20 000 to 40 000 DWT), "Panamax" vessels (40 000 to 65 000 DWT), and "Capesize" vessels (65 000 to 120 000 DWT). Some Handysize vessels can traverse the Great Lakes and load grain at Thunder Bay. Panamax vessels are the largest that are capable of transiting the Panama Canal. The Capesize vessels are too large for either the Panama or Suez Canals.*

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Historically, Canada shipped the majority of its export grain (primarily wheat) to customers via Thunder Bay and the St. Lawrence Seaway. Canada's markets were found in Great Britain, Europe and the USSR. However, grain traffic patterns in Western Canada have undergone significant shifts in recent years. Table 1 illustrates the net shipments of grain from terminal elevators at the four western grain ports as well as the direct exports to the U.S. for each of the past 15 years. The table shows that Thunder Bay's portion of western grain movement has fallen to just over half the level it was 15 years ago. At the same time the West Coast ports have been handling between 55% and 60% of the grain in the past 10 years, compared to just over 43% 15 years ago. There has also been a dramatic increase in the direct exports to the U.S., which have risen from 50,000 to 60,000 tonnes per year to over three million tonnes per year during this period.

TABLE 1
Net Shipments of Grain from Terminal Elevators and Prairie Direct
thousands of tonnes

Crop Year	Vancouver	Prince Rupert	West Coast Total	Thunder Bay	Churchill	SUB-TOTAL	Prairie Direct Exports	TOTAL
1984/85	9 548.2	1 028.2	10 576.4	13 276.2	437.3	24 289.9	61.6	24 351.5
1985/86	10 761.6	1 400.8	12 162.4	12 093.2	391.7	24 647.3	49.0	24 696.3
1986/87	11 866.4	4 160.6	16 027.0	15 132.7	558.1	31 717.8	59.6	31 777.4
1987/88	13 015.9	3 960.5	16 976.4	14 020.1	568.9	31 565.4	301.3	31 866.7
1988/89	9 122.9	2 706.5	11 829.4	7 514.1	50.1	19 393.6	358.9	19 752.5
1989/90	11 599.4	4 800.2	16 399.6	9 239.5	308.8	25 947.9	527.0	26 474.9
1990/91	11 903.7	4 570.2	16 473.9	12 863.7	376.1	29 713.7	861.6	30 575.3
1991/92	14 640.4	5 290.7	19 931.1	10 505.1	233.5	30 669.7	1 296.6	31 966.3
1992/93	13 042.0	4 837.8	17 879.8	6 998.1	249.6	25 127.5	1 328.4	26 455.9
1993/94	11 914.0	4 504.2	16 418.2	8 332.5	241.0	24 991.7	3 377.7	28 369.4
1994/95	13 052.1	5 240.9	18 293.0	10 062.6	291.3	28 646.9	2 093.8	30 740.7
1995/96	11 210.3	3 581.3	14 791.6	6 220.8	227.3	21 239.7	1 889.2	23 128.9
1996/97	11 305.1	4 047.3	15 352.4	8 672.1	335.7	24 360.2	3 290.9	27 651.1
1997/98	11 152.2	4 187.8	15 340.0	8 071.6	370.2	23 781.8	3 001.7	26 783.5
1998/99*	10 567.4	1 261.5	11 828.9	6 879.2	318.4	19 026.5	3 319.9	22 346.4

Source: Canadian Grain Commission
Includes: shipments of wheat, durum, oats, barley, rye, flaxseed and canola.
* 1998/99 data is preliminary

The current markets for Canada's grain result in the majority of shipments traveling west and being handled by the Ports of Vancouver and Prince Rupert. Table 2 provides a summary of average tonnage of shipments from Canadian ports for the past 10 years. West Coast ports have shipped 64% of the grain throughout this period, while Thunder Bay has shipped nearly 35%. Churchill has handled just over one percent.

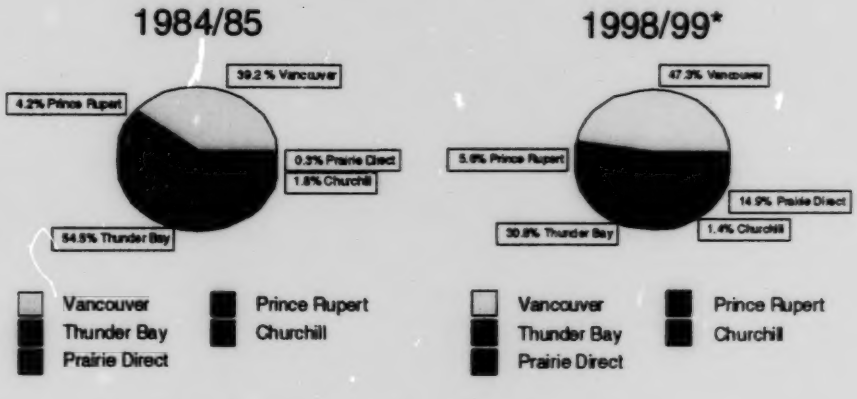
TABLE 2 Summary of Shipments from Canadian Grain Ports thousands of tonnes		
Port	**Average Annual Tonnage for the Ten Year Period 1989/90 to 1998/99***	**% of Total Canadian Grain Shipments**
Vancouver	12 038.7	47.5
Thunder Bay	8 784.5	34.7
Prince Rupert	4 232.2	16.7
Churchill	295.1	1.2

Source: Canadian Grain Commission
Includes: wheat, durum, oats, barley, rye, flaxseed and canola.
* 1998/99 data is preliminary

Chart 1 excerpts data from Table 1 to illustrate the percentage change over the past 15 years. West Coast shipments have increased from 43% to 53% of the total. Prairie Direct shipments have surged from less than half a percent to nearly 15%, and Thunder Bay has dropped from 54.5% to 30.8% of the total of shipments. Note that if 1997/98 data had been used for comparative purposes, the Prince Rupert percentage would have been 15.6 or nearly three times that of 1998/99.

CHART 1:

Net Shipments from Ports and Prairie Direct
percentage distribution



Source: Canadian Grain Commission.
Includes: wheat, durum, oats, barley, rye, flaxseed, and canola.
* 1998/99 data is preliminary.

2.1 Thunder Bay/Seaway

The first export shipments of grain from Western Canada, in the mid 1870s, were loaded onto a steamer and traveled up the Red River to a U.S. railway point. They traveled by rail to Duluth, where they were loaded onto a vessel to transit the Great Lakes. When the grain reached an eastern port it was transferred to an ocean going ship for overseas delivery. The grain handling and transportation system has evolved and expanded continually since that time.

Thunder Bay is located at the head of the Great Lakes/St. Lawrence Seaway system, 3,700 kilometers into the heart of the North American continent. The rail line connecting Port Arthur and Fort William (now Thunder Bay) to Winnipeg and prairie grain production was completed by the Canadian Pacific Railway (CP Rail) in 1882. CP Rail also built a grain terminal, which started operation in 1884, to transfer grain from rail to ship. The railway continued to build terminal elevators, as did the Canadian Northern Railway, which arrived in Thunder Bay in 1900. The Canadian Northern Railway became part of the Canadian National Railway (CN) when financial difficulties led to the government taking over operations in 1918. Many of the original grain terminals were built along the Kaministiquia River in Fort William. These terminals were eventually purchased by the private and cooperative grain companies. Western Grain By-Products, which handles a wide range of specialty crops and offers custom bagging at their 40,000 tonne unlicensed facility, is the only remaining terminal operating on the River.

According to the Canadian Grain Commission (CGC) publication "Grain Elevators in Canada", the licensed terminal elevators at Thunder Bay have declined from 22 elevators with 2 873 120 tonnes capacity in 1970 to seven terminals with 1 278 540 tonnes capacity at present (Table 3). The CGC is responsible for licensing, as well as weighing and inspection, for operations at terminal elevators in Canada. Although the storage capacity has been reduced, the throughput capacity of the remaining terminals has increased significantly during this period through extensive modernization and upgrading of their equipment and facilities. The seven remaining terminals are all located on the Thunder Bay waterfront.

TABLE 3
Thunder Bay Terminal Elevator Capacity

Company	Railway	Licensed Capacity (tonnes)	Percent
Agricore	CP	167 000	13.1%
Cargill	CN	176 020	13.7%
James Richardson Int.	CP	210 030	16.4%
Parrish & Heimbecker	CP	40 800	3.2%
Saskatchewan Wheat Pool	CN	362 650	28.3%
United Grain Growers A	CN*	231 030	18.0%
United Grain Growers M	CP	91 010	7.1%
TOTAL		1 278 540	100.0%

Source: Canadian Grain Commission

* Although UGG A is served by CN track, there is an arrangement whereby CP does the day to day switching into the terminal.

Two bulk handling facilities at Thunder Bay are also capable of handling grain. Thunder Bay Terminals Ltd. was built in 1979 to provide an assured supply of thermal coal to Ontario Hydro. It is a fully automated facility with available capacity, and is capable of providing high throughput for agri-product movements. Valley Camp also handles grain and grain products, including approximately 45 000 tonnes of Canadian Wheat Board (CWB) grain this past summer.

A one-way voyage from Montreal through the Seaway to Thunder Bay takes about five days. Both the Port of Thunder Bay and the Seaway operate 24 hours a day, seven days a week, from the end of March through to late-December. In some recent years, the season has been extended as weather permitted. The grain terminals at Thunder Bay will also operate 24 hours a day, seven days a week when the demand exists.

Thunder Bay typically operates from April 1st until freeze-up in late December each year. In most years the grain terminals also provide a handling and cleaning role for "winter rail" programs, which are grain trains shipped to transfer elevators in eastern Canada (usually Montreal and Quebec City) in order to meet CWB sales demands throughout the winter months. Thunder Bay's terminal elevators handle a wide variety of grains, oilseeds and specialty products.

Vessels loading grain at Thunder Bay are limited to those which can transit the Welland Canal and locks of the Seaway system. The Great Lakes bulkers reach a maximum payload capacity of about 29 000 tonnes. Ocean going (saltie) vessels also load at Thunder Bay. These vessels typically are limited to carrying 18 000 to 20 000 tonnes, although certain categories of salties can load up to 25 000 or 26 000 tonnes and still navigate the Seaway.

Thunder Bay and Seaway traffic reached peak levels for all commodities in the late 1970s. It has been in steady decline since, due first to an economic recession in the early 1980s which had a serious impact on the manufacturing sector in eastern Canada, and then to shifting commodity traffic patterns. Grain shipments from the Port of Thunder Bay reached their peak in the early 1980s. In calendar year 1983, 17 680 000 tonnes were handled at Thunder Bay. USSR and European customers at one time provided strong demand for grain movement through the eastern system. However, the EU Common Agricultural Policy subsidies led to surplus grain supply in Europe during the 1980s and 1990s, and the creation of a major competitor for sales markets as opposed to an importer of Canadian grains. The demise of the USSR, which was a consistent, large customer for Canadian grains, and the resulting financial difficulties experienced by the former Soviet Union (FSU) countries, have also contributed to a significant decline in the demands on the Great Lakes and Seaway system.

The 1991/92 crop year was the last that saw a substantial amount of wheat and barley exported to the FSU. In that year 5.3 million tonnes was shipped. The following year the figure dropped to 2.0 million tonnes. Since the 1992/93 crop year, exports of wheat and barley to the FSU have been negligible. Table 4 illustrates the changes in grain purchases from Canada by some of Canada's major customers over the past 10 years.

TABLE 4
Major Grain Purchasing Customers
Million tonnes

Country	1987/88	10 year average	1997/98
Former USSR	4.714	2.801	0.060
China	7.864	4.512	2.005
Japan	4.168	4.252	3.652
United States	0.934	2.600	3.639

Source: Canadian Grain Commission
Includes: wheat, durum, barley, oats, rye, flaxseed and canola.

Other factors that have had negative impacts on Seaway traffic are the growth in container and intermodal traffic, much of which moves by rail, and the increased reliance on just-in-time delivery practices for consumer products which move by truck. The bulk of the general commodity container traffic on the Seaway is on the Montreal and eastern section. Recently there has been an increase in grain and grain products moving by containers which are filled in eastern Canada. These shifts have contributed to the decrease in bulk shipments on the Seaway. Improved efficiencies in rail and truck transport have resulted in more aggressive competition from these modes as well.

The Great Lakes and St. Lawrence Seaway system (GL/SS) was developed cooperatively by Canada and the United States. Prior to the completion of upgrades to the GL/SS in 1959, grain traveling from prairie to eastern tidewater was shipped by laker from the Lakehead to Georgian Bay where it was transferred to rail or smaller vessel for transport to tidewater. With the opening of the modern Seaway system in 1959, the process became much simpler, with lakers traveling direct to tidewater ports at Montreal and east of Montreal, or product being loaded in the Lakehead for direct shipment overseas. Canada's investment in the Seaway is estimated to be close to one billion dollars since the 1950s.

The St. Lawrence Seaway proper extends from Montreal to Lake Erie and includes 15 locks, seven in the Montreal/Lake Ontario section and eight in the Welland Canal. The St. Lawrence Seaway Management Corporation (SLSMC) is responsible for the operation of 13 of these 15 locks. The U.S. Saint Lawrence Seaway Development Corporation operates two of the locks in the Montreal/Lake Ontario section of the Seaway. The "Soo" Locks are located at Sault Ste. Marie, between Lake Superior and Lake Huron.

According to the SLSMC's 1998/99 Annual Report, the economic activity currently generated by the Seaway translates into more than 17,000 jobs in transportation and in services to the Seaway and shipping lines. Providing the shortest route to the heartland of North America for shippers from European markets, the marine transportation through the GL/SS system is also the most environmentally friendly. Rail traffic emits three times more pollutants and trucking emissions are 13 times the levels of marine traffic.

Six terminal elevators are located in the St. Lawrence River, between Montreal and Port Cartier. The combined licensed capacity of these terminals is 1 476 220 tonnes. Table 5 lists the St. Lawrence terminals and their capacity. The elevators at Montreal, Sorel and Trois-Rivières can load vessels to a maximum of between 35 000 and 45 000 tonnes. Québec and Baie-Comeau elevators can load vessels in the Panamax category, and some greater with a top-up at Port Cartier. Port Cartier can accommodate Capesize vessels. Approximately 2/3 of the volume handled is CWB grains. The balance is largely U.S. corn and other grains.

TABLE 5
St. Lawrence Terminal Elevator Capacity

Location	Owner	Railway	Licensed Capacity (tonnes)	Percent
Baie-Comeau	Cargill	None	441 780	29.9%
Port Cartier	Louis Dreyfus	None	292 950	19.8%
Quebec City	Bunge of Canada	CN – CP	224 030	15.1%
Montreal	Montreal Port Corp.	CN – CP	262 000	17.7%
Sorel	James Richardson Int.	None	146 460	9.9%
Trois-Rivières	Upper Lakes Group	CP	109 000	7.4%
TOTAL			1 476 220	100.0%

Source: Canadian Grain Commission

The grain handling system in the Great Lakes/Seaway system was built with sufficient capacity to handle peak demands even greater than those experienced in the early 1980s, when as much as 15.5 million tonnes were handled. This includes the Thunder Bay grain terminals, the Great Lakes bulkers, the Seaway locks and channels and the Lower St. Lawrence transfer elevators. As these assets generally have lives in excess of 50 years, the sector has been characterized by serious over-capacity in the 1990s.

Grain, iron ore and coal have been the most significant cargoes on the GL/SS. Down-bound movement of grain provides for an up-bound backhaul movement of iron ore. This two-way traffic facilitates the marketing of iron ore from the border region of Quebec and Labrador to the Canadian steel industry in Ontario and the U.S. Upper Lakes. Now that Alberta natural gas is piped to Ontario, the demand for coal from Western Canada has been substantially reduced.

After 40 years of government operation, on October 1, 1998, the St. Lawrence Seaway Management Corporation (SLSMC) became responsible for the day-to-day management of the Seaway. The SLSMC is a not-for-profit corporation governed by a nine-member board made up of industry (including grain) and government representatives. The Government of Canada retains ownership of the lands and all fixed assets on the system. With the commercialization of the Seaway, the goal of the new management is to make the system an even safer, more cost-effective, and reliable mode of transportation.

The transfer of the Seaway to the SLSMC was part of the *Canada Marine Act, 1998* and a series of major federal policy initiatives to modernize and commercialize the Canadian transportation sector. The initiatives are designed to ensure that business principles are applied to the development and operation of the transportation infrastructure and services. The Seaway went through some low traffic/low revenue years in the early 1990s (shifts in grain markets, downsizing of heavy industry in the Great Lakes/Seaway region, competition from other modes and routes, and aging infrastructure). Commercialization of the operations and maintenance of the Seaway were identified as the preferred methods of bringing commercial discipline, cost reductions and improved efficiency and thus improving the outlook for the system. In short, this initiative is intended to make Canada's marine system more responsive to the needs of its users, who require affordable, efficient, effective transportation.

2.2 Great Lakes Bulkers

2.2.1 The Role of Bulk Carriers

The vessels in the Great Lakes bulk fleet were custom designed for the Seaway trade. They were built to the maximum dimensions allowed by the Seaway lock system. Operating in fresh water, their operating life is considerably longer than that of ocean-going vessels. Straight-deck bulkers are dependent on shore-based equipment to unload their cargoes, as opposed to self-unloaders which carry their own unloading equipment. Canadian straight-deck bulkers primarily carry grain downbound to St. Lawrence ports and iron ore as backhaul cargo for upbound destinations. Grain and iron ore accounted for over 92% of the total tonnage moved by bulkers in 1998. Self-unloaders serve a more diversified market, moving coal, iron ore, stone, salt, gypsum and other cargoes.

With respect to the movement of wheat and other grains for human consumption, straight-deck bulkers fulfill a special role. Self-unloaders are not suited to this trade for many reasons: they tend to damage the grain by breaking the kernels; they are designed to carry heavy cargoes and can only load about 18,000 tonnes of grain before the volume limit is reached; and, only the Quebec City terminal, among the many grain terminals on the lower St. Lawrence, is equipped to receive grain from self-unloaders.

2.2.2 Size of Fleet

From 1980 to 1998, the number of straight-deck bulkers in the inland fleet shrank from 86 to 34, a decline of 60%. The gross registered tonnage (GRT) of the bulk fleet also fell, but to a lesser extent, to approximately 50% of its 1980 level. The relatively smaller decline in tonnage is explained by a high rate of scrapping, etc. for the older, smaller vessels. Thus the average GRT per vessel increased over the period, from 13,847 GRT in 1980 to 16,815 GRT in 1999.

TABLE 6 EVOLUTION OF INLAND FLEET: BULK CARRIERS, 1980-1998					
	1980	1985	1990	1995	1998
Number of vessels	86	65	51	38	34
Total GRT	1,159,864	941,607	768,358	645,153	571,709
Average GRT	13,487	14,486	15,066	16,978	16,815
Number of Companies	10	10	8	6	6
Tonnes Carried (000s)	38,483	19,171	25,238	NA	15,771

GRT: Gross Registered Tonnage
Source: Dominion Marine Association/Canadian Shipowners Association

The number of firms owning bulkers also declined over the period from 10 in 1980 to only six firms today – Algoma Central Corporation, Canada Steamship Lines Inc. (CSL), Groupe Desgagnés inc., N.M. Paterson & Sons Limited, P & H Shipping, and Upper Lakes Group Inc. Algoma Central and Upper Lakes Group control 21 out of the total of 34 vessels in the bulker fleet; they operate these vessels through a pooling arrangement under the name Seaway Bulk Carriers. CSL's vessel – the *Ferbec* – operates on the lower Saint Lawrence and is too large to pass through the Seaway locks. Thus only 33 vessels owned by five companies are actually employed in the movement of grain through the Seaway.

2.2.3 Age of Fleet

The opening of the modern St. Lawrence Seaway in 1959 led to the construction of a new generation of lakers 222.5 meters long. Only one laker operating today – P & H's *Oakglen* – predates the Seaway opening. Three other vessels were launched in 1959 and 24 were commissioned during the 1960's. Only two bulkers entered service during the 1970's. Only one vessel built in the 1980's remains in the bulker fleet -- the *Paterson*, built in 1985.

Three other bulkers launched in the 1980's have since been converted to self-unloaders in response to low levels of utilization of the bulker fleet. The *Prairie Harvest*, now the *Atlantic Huron*, was converted in 1989. The *Algowest*, built in 1982, was converted to a self-unloader in 1998 and the *Capt. Henry Jackman*, built in 1981, was converted to a self-unloader in 1996. Other vessels built as bulkers have also joined the self-unloader fleet over the years. (Only three of the remaining vessels in the bulker fleet could be candidates for conversion.)

No new vessels have been built for the Great Lakes fleet since 1985, when the last government subsidy to shipbuilding was phased out. However, there have been investments in conversions of bulk vessels to self-unloaders and in widening/lengthening/deepening vessels (two vessels) to take maximum advantage of the Seaway dimensions.

2.2.4 Cargo Movements

The Canadian Shipowners Association (CSA) reported that bulkers carried 15.7 million tonnes of cargo in 1998, accounting for 21.7% of the total tonnage moved by members' vessels.

Carriage of grain and iron ore constitute the areas where bulkers were most active, with these cargoes accounting for over 92% of their total tonnage in 1998. Bulkers moved 82.6% of the 8.4 million tonnes of grain handled by CSA members and 37.1% of the 20.5 million tonnes of iron ore. Self-unloaders accounted for the balance of the movement of these commodities – 17.4% for grain (feed grains, mainly oats) and 62.7% for iron ore. (In 1990, bulkers carried 65% of the iron ore so the proportion is shifting towards self-unloaders.)

Domestic iron ore traffic is loaded at the St. Lawrence ports of Pointe Noire, Port Cartier and Sept-Iles.

Many ore unloading docks today have no equipment suitable to unload a straight-deck bulk vessel and thus can only be served by self-unloaders. A review of the ore unloading docks listed in *Greenwood's Guide to Great Lakes Shipping* reveals that only Burns International Harbour, Indiana; Dofasco's dock in Hamilton, Ontario; Indiana Harbour, Indiana; and South Chicago, Illinois are still equipped to handle straight-deck bulkers. The list of U.S. docks which can be served by self-unloaders only includes: Ashtabula, Ohio; Cleveland, Ohio; Conneaut, Ohio; Detroit, Michigan; Gary, Indiana; Huron, Ohio; Lorain, Ohio; and Toledo, Ohio. For Canada, the iron ore docks set up to handle only self-unloaders include: the Stelco docks in Hamilton and Nanticoke, and the Algoma Steel dock in Sault Ste. Marie. Thus only Dofasco on the Canadian side is currently dependent on movements of iron ore in bulkers.

The traditional pattern of a grain movement downbound from Thunder Bay to the lower St. Lawrence and a backhaul cargo of iron ore from Labrador upbound makes most economic sense for long haul iron ore movements to a port like Chicago. Iron ore bound for Hamilton could actually be carried from Labrador on a shuttle basis, without relying on a backhaul, as it is a much shorter route; but this option has been estimated to be up to 50% more expensive.

Straight-deck bulkers also move small amounts of cement, coke, salt, and other miscellaneous bulk cargoes. However, these trades are all dominated by self-unloaders.

2.2.5 Fleet Utilization

The fleet of bulk vessels has not been fully utilized in recent years. Depending on demand, vessels may be placed in service for only part of a shipping season or may be left tied up and not activated at all. From the perspective of the shipowner, it is more cost effective to have part of the fleet occupied fully for the whole season than to activate the whole fleet for just part of the season (crew costs, commissioning costs, etc.)

Algoma Central Corporation, owner of the second largest bulker fleet on the lakes and a partner in Seaway Bulk Carriers, is the only laker operator to be a publicly traded corporation and to issue a public annual report. For 1998, they stated that their bulker fleet continued to be under-utilized and they were only able to achieve a 61% utilization factor. This compares to 72% for both the 1996 and 1997 seasons. They could have moved as much grain with half the number of ships, if it had moved evenly throughout the year. Instead, they had the whole fleet active for three months and a major portion laid up for the balance of the season. (By comparison, their self-unloader fleet achieved a capacity utilization rate of 96-97% over the same years.)

2.2.6 Competitive Situation

Lakers moving grain from Thunder Bay to lower St. Lawrence ports for export face competition from various other routings and modes. Now that cleaning is available in elevators on the prairies and in Quebec City, grain may move directly by rail to Quebec City or Montreal for loading onboard ocean-going vessels. Grain may also move by rail to West Coast Canadian ports, to Churchill, Manitoba, or south to a U.S. port. Grain may also travel down the Mississippi River by barge or may be loaded on an ocean-going vessel ("salties") in Thunder Bay. The laker fleet currently handles a significant element of residual traffic of Canadian and U.S. grain which cannot comfortably move by another route/mode. Thus the volume fluctuates considerably from year to year. When the Mississippi River is experiencing problems, more U.S. grain may move via the Seaway. When the Western Canadian grain harvest is very large and exceeds the capacity of Canada's West Coast terminals, more grain will flow via the Seaway. When imports of steel are at low levels and "salties" are not entering the Seaway system in large numbers, more grain will move on lakers.

There is currently considerable investment in elevators in Thunder Bay and on the lower St. Lawrence which is dependent on the movement of grain by straight-deck bulkers. Many tidewater ports on the lower St. Lawrence are not serviced by rail – Port Cartier (Dreyfus), Baie-Comeau (Cargill) and Sorel (Richardson). Only Quebec City's facility can handle shipments from self-unloaders and, as discussed above, self-unloader vessels are not suited to the movement of high quality grains. If the bulker fleet disappears, all of these facilities would become largely obsolete.

Respecting the iron ore trade, as discussed above, the self-unloader fleet is handling an increasing share of this market. Dofasco is the only Canadian steel producer still reliant on straight-deck bulkers to deliver iron ore. Dofasco has recently invested (approximately $12 million) in new facilities for the unloading of straight-deck bulkers at its Hamilton facility. Dofasco also lacks the on-dock storage space necessary for the use of self-unloaders. Thus if the bulker fleet was no longer available to deliver iron ore, Dofasco would have to write off its recent investment and expend further funds to adapt its facilities to accept self-unloaders.

2.2.7 Competition from Ocean Carriers ("Salties")

Nineteen ninety-eight was a boom year for imports of steel to eastern Canada and the U.S. via the St. Lawrence Seaway. Low priced steel from Russia, Brazil, and the Far East flowed into North America in response to low demand in their domestic markets and depreciating currencies versus the U.S. dollar. The foreign flag vessels which

carry the steel inbound, frequently fill their holds with export grain (primarily of U.S. origin) on the outbound leg of their voyage to help maximize profits. This reduces the volume of grain (U.S. and Canadian) available to be moved by laker to the lower St. Lawrence ports. The steel imports would also significantly reduce the demand for iron ore movements.

Ocean-going vessel transits on the Montreal-Lake Ontario section of the Seaway were up by 29% in 1998 as compared to 1997, 1429 transits versus 1108 in 1997. On the Welland Canal Section, transits by "salties" were up by 24.9%, from 930 to 1162. Laker transits were up by only 1.6% on the MLO section in 1998 (from 1701 to 1729) and actually fell by 7.7% on the Welland. The grain traffic breakdown for 1998 also reveals quite a shift in favour of ocean vessels as compared to 1997 – a total of 13.3 million metric tonnes of grain moved downbound through the Seaway system, 6.2 million tonnes on ocean vessels and 7.1 million tonnes on lakers.

The following table provides the historical split in the carriage between laker and ocean vessels of grain (U.S. and Canadian) downbound on the Seaway from 1982 to 1997. Historically, the major part of Canadian origin grain moved on lakers as well as a portion of the U.S. origin grain. Ocean-going vessels loaded U.S. grain and a small percentage of grain out of Thunder Bay (non-Wheat Board grains). This is illustrated by the second table, which provides a split by the country of origin of the grain.

TABLE 7
Laker/Ocean Split of Grain Traffic on the St. Lawrence Seaway, 1982-1997
Downbound Traffic – Tonnes

	1982*	1986	1990	1994	1997
Ocean	5,987,024	4,809,506	2,505,599	5,512,523	4,961,560
Laker	18,143,148	12,334,097	10,330,059	8,230,053	8,861,180
Total	24,130,172	17,143,603	12,835,658	13,742,576	13,822,740
***MLO only**					

Source: St. Lawrence Seaway Authority. *Traffic Report.*

TABLE 8
Grain Traffic on the St. Lawrence Seaway by Country of Origin, 1982-1997
Downbound Traffic – Tonnes

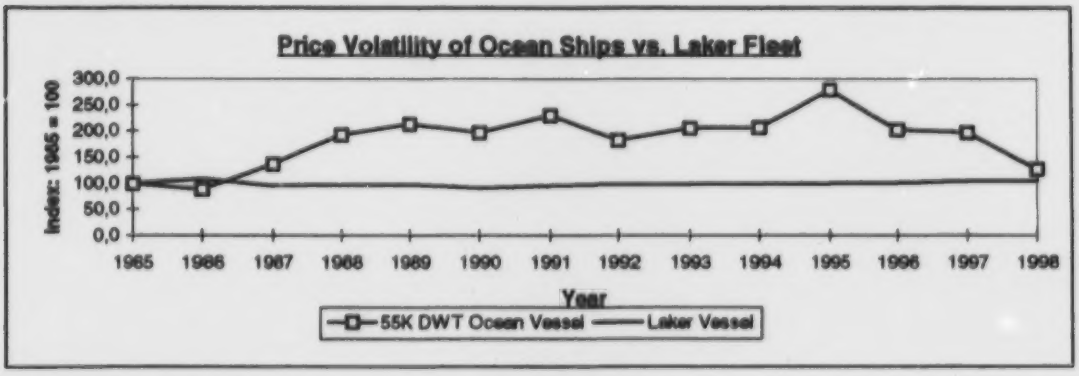
	1982*	1986	1990	1994	1997
U.S. origin	8,322,392	4,844,169	4,227,324	5,465,305	4,721,627
Canadian origin	15,942,563	12,299,434	8,608,334	8,277,271	9,101,113
Total	24,264,955	17,143,603	12,835,658	13,742,576	13,822,740
***MLO only**					

Source: St. Lawrence Seaway Authority. *Traffic Report.*

Foreign flag ocean-going vessels have several advantages over the laker fleet in regard to costs. First, they are already positioned in the lakes to drop off an inbound cargo, usually steel, and can negotiate a favourable rate for grain carriage outbound which need only cover the marginal cost of moving the grain. Second, the grain they load does not have to pass through an elevator on the lower St. Lawrence, saving these costs. Third, the foreign-flag vessel can employ lower cost foreign nationals as crew and also faces lower taxation and capital costs.

As an offset to the above, the point should be made that the domestic fleet of straight-deck bulkers is largely captive to the lakes. It is here to stay. The availability of "salties" varies substantially from year-to-year depending on the demand for inbound shipments of steel and on the level of ocean rates generally. If ocean rates are very depressed, a "salty" may be willing to wait several days in the lakes until an outbound cargo becomes available. This is less likely if demand is strong and charter rates high in the international trades. Data from the Canada Grains Council indicates that even in current dollars, the cost of lake transportation has been very stable since the mid-1980s. When looking at international rates for bulk carriers, over the same period, the rates in years of high demand may be two to three times the rates in periods of low demand/high supply. The following graph illustrates the volatility of deep-sea charter rates for a typical bulk vessel (55,000 dwt) as compared to lake transportation costs over the 1985-1998 period.

CHART 2:



Source: Canada Grains Council and Lloyd's Maritime Economist

2.3 Vancouver

Although the CP Rail transcontinental railroad was completed in 1885, the first major terminal elevator construction in Vancouver did not take place until 1916, two years after the completion of the Panama Canal. At that time, export markets were primarily in the United Kingdom. It was not until the 1920s that ocean freight rates declined to the point at which West Coast shipments became a competitive option.

Vancouver and Prince Rupert, on the west coast of British Columbia, are both year-round port facilities. The Port of Vancouver, with its naturally deep harbour, is Canada's largest and busiest port. A wide variety of the grains, oilseeds and specialty products produced in Western Canada are handled at Vancouver's licensed terminal elevators, bulk handling facilities and container facilities.

There are five grain terminals, located on Burrard Inlet in the Port of Vancouver, with licensed storage capacity of 929 290 tonnes (Table 9). The most recent terminal elevator construction at Vancouver is James Richardson International, which was rebuilt in 1978/79 after a fire destroyed its predecessor. Other terminal elevators have invested significantly in upgrades to handling and cleaning capacity.

TABLE 9
West Coast Terminal Elevator Capacity

Location	Owner	Railway	Licensed Capacity (tonnes)	Percent
Vancouver	Agricore/Cargill (Cascadia)	CP	282 830	24.8%
	James Richardson Int.*	CN	108 000	9.5%
	Pacific Elevators	CN/CP	199 150	17.5%
	Saskatchewan Wheat Pool*	CN	237 240	20.8%
	United Grain Growers	CP/CN	102 070	9.0%
SUB-TOTAL			929 290	
Prince Rupert	Prince Rupert Grain	CN	209 510	18.4%
TOTAL			1 138 800	100.0%

Source: Canadian Grain Commission
* located on the north shore of Burrard Inlet in North Vancouver.

Two bulk handling facilities, Neptune Bulk Terminals and Vancouver Wharves, located on the north shore of Burrard Inlet, also ship grain and grain products. Vancouver Wharves has completed a new $52.5 million facility which will "soft-handle" bulk specialty products such as peas and lentils, as well as provide direct hit transshipment of canola meal pellets, hay cubes and malt.

In recent years, Saskatchewan Wheat Pool and Cargill (and previously, the Mercury Terminal consortium) explored the possibility of constructing a new terminal at Robert's Bank. The concept was to build a bulk handling facility that could transship unit trains of clean grain, shipped from high throughput prairie elevators, directly onto waiting vessels. The Mercury Terminal proposal involved minimal storage capacity. It was thought to be a prototype for the terminal elevators of the future. When Cargill entered into an ownership arrangement with Alberta Wheat Pool (now Agricore/Cascadia) Terminal, these plans were abandoned. It was felt that the economics and current grain volumes could not support such an undertaking.

The proportion of total shipments going through West Coast ports increased significantly when Prince Rupert Grain terminal was completed and became fully operational during the 1986/87 crop year. Vancouver became Canada's main grain export port for the first time in the 1988/89 crop year, when it surpassed Thunder Bay in the level of shipments. Asian/Pacific markets have provided increased demand for Canadian grain during this period. Favourable ocean freight rates may contribute to the traffic growth through the West Coast ports and have at times resulted in grain

being shipped via the Panama Canal to meet European and Mediterranean demand. The terminal elevators at Vancouver are capable of berthing Capesize vessels, although the overall length and air draft of the larger ships may limit the capacity of Pacific and UGG terminals to handle them. Generally, vessels presenting at Vancouver are not larger than 80 000 DWT, and the majority are in the Handysize category.

Ocean freight fluctuates significantly depending on supply and demand. The past few years saw the downturn in Asian economies, accompanied by depressed currencies. This resulted in an increase in exports of commodities such as steel to North America, putting heavy demand on bulk cargo shipments from Asia. A result was cheaper rates for grain shipments to Asian destinations as a backhaul. During this period vessel owners were reluctant to release vessels from the lucrative Pacific trade in order to service customers in the Atlantic region. Recently a more traditional freight market has resumed.

2.4 Prince Rupert

Prince Rupert is Canada's second most important West Coast port, exporting billions of dollars in coal, grain, lumber and potash every year. The City of Prince Rupert, which was incorporated in 1910, began as the western construction terminal for the Grand Trunk Pacific Railway, which later became part of the Canadian National Railway. The general manager of the Grand Trunk Pacific Railway, Charles Hays, wanted a deep sea Pacific port at the mouth of Skeena River. The railway was completed in 1913, but Mr. Hayes did not see his dream materialize as he was lost with the Titanic. When the CNR Docks were added, the city became a major seaport for foreign ships taking on fish and timber products. The federal government built a 34 000 tonne grain terminal at Prince Rupert in 1925. This terminal was later enlarged to a capacity of 63 000 tonnes. The original grain terminal could handle over one million tonnes of grain a year.

The first grain terminal was replaced in 1986 by Prince Rupert Grain Ltd. with 209 510 tonnes capacity (Table 9). Construction of Prince Rupert Grain terminal began in 1983/84. The terminal was built by the six major grain companies (now five due to the amalgamation of MPE and AWP) with the financial backing of the Alberta government. Projections of increased demand from Asian countries for Western Canadian grain, and the perception of high costs for moving grain through the eastern system, resulted in the building of a state-of-the-art grain terminal at Prince Rupert.

Prince Rupert Harbour is the third largest ice-free natural harbour in the world. This deep-water harbour is capable of handling Capesize vessels. The modern, efficient, licensed terminal, Prince Rupert Grain Ltd., primarily handles CWB grains, but has been exporting an increasing number of non-CWB grains and oilseeds in the past two years.

Fairview Agport is a bulk handling facility specializing in direct hits of unit trains of export-ready grains and products, operated by the Prince Rupert Port Authority. A new ship loader, which doubles the capacity of the previous loader, is currently being installed. It has the ability to "soft-handle" fragile commodities such as peas and lentils.

Prince Rupert's proportion of grain exported through the West Coast increased from approximately 10% 15 years ago, to an average of about 26% for the 12 years between 1986/87 and 1997/98. In the 1998/99 crop year the proportion has again returned to approximately 11%. Due to the low volumes of grain moving through the Port, the terminal was shut down from June 30, 1998 to October 19, 1998 and again from March 22, 1999 to the present. Now, at the end of September 1999, Prince Rupert Grain is again resuming operations. In 1996 Prince Rupert Grain was also shut down from the week of July 1st to the week of September 23rd. The Prince Rupert Grain terminal has been shut down nearly one third of the time during the past three crop years.

2.5 Churchill

The rail line to Churchill was built by the Canadian government to satisfy requests from Western Canada for an ocean port to access European markets. Construction of the line started from The Pas prior to WWI, was suspended during the war, delayed by lack of funds after the war and not completed until 1929. The Canadian government also built the grain terminal at the Port of Churchill. The first shipments through the grain terminal were in 1931.

The Hudson Bay rail line was the first major Canadian rail line built on permafrost and presented significant engineering challenges to CN. Since the late 1970s over $3 million has been spent, with assistance from various federal programs, studying ways to stabilize the railway road bed over the permafrost and discontinuous permafrost. Until two years ago, the line was restricted to transporting boxcars, which were 40 to 50 years old. 1,955 of these boxcars were rehabilitated between 1985 and 1989 under the Canada/Manitoba Subsidy Agreement on Churchill. In 1997, the Port of Churchill successfully handled aluminum hopper cars (70 tonne) and in 1998, began receiving fully loaded steel hopper cars (100 tonne) of grain on a regularly scheduled basis.

The Port of Churchill, located on the shores of Hudson Bay in northern Manitoba, has four deep-sea berths, and dredging, soon to be under way in the harbour, should provide the capability of handling vessels up to 57 000 DWT. Two of the berths are used for grain loading. Most vessels which arrive at Churchill are in the 30 000 to 35 000 tonnes range.

In August of 1997, CN sold its northern Manitoba rail network, extending 810 miles north from The Pas, Manitoba into the Port of Churchill, to OmniTRAX, the leading privately held North American shortline railway and transportation company. On September 4, 1997, the federal government transferred ownership of the 140 020 tonne grain terminal to OmniTRAX. These two subsidiaries of OmniTRAX are operated as Hudson Bay Railway and Hudson Bay Port Company respectively.

In the past two years, substantial rehabilitation work has been undertaken at the Hudson Bay Port Company. This work includes: a new dust control system; hopper conversion – removal of boxcar dumpers and installation of hopper car unloading facilities to accommodate steel hopper cars; concrete stabilization and restoration work

to windows; sewer and water upgrading; grain cleaner overhauls; wharf repairs; dredging; purchase of new tug boat; new locomotive and track mobile; and, improved safety features – fire alarms, etc.

Churchill has handled from one to two percent of western grain movement annually for the past 15 years. The exception to this was the 1988/89 crop year when Churchill saw only 50 000 tonnes of throughput. The average tonnage handled throughout this period has been 330 000 tonnes, reaching a high of 569 000 tonnes in the 1987/88 crop year.

The substantial reduction in purchases from European and FSU countries and the fact that Mediterranean/Middle East buyers are increasingly taking delivery via alternate routes, have contributed to the shrinking traditional customer base for Churchill shipments.

Churchill has a shorter shipping season, dictated by the ice formation in Hudson Strait. The period during which non-ice-strengthened vessels can freely navigate from the Atlantic Ocean to the Port typically extends from July 20th to October 31st, just over 100 days. Efforts are under way by OmniTRAX, supported by the federal and provincial governments, to extend this season and secure the cooperation of the international insurance industry in reducing the premiums charged for ships arriving at the northern Port.

A further challenge to the Port of Churchill is that this shipping season coincides with the harvest season in Canada and other northern-hemisphere countries. This is a time of traditionally weak market demand and low prices. The strongest export demand for Canadian grains typically falls between October and April each year. The Churchill shipping season actually starts toward the end of the CWB crop year, prior to the Western Canadian harvest. In some years, when grain supplies are depleted, this affects the available supply for Churchill shipping. Recently, the CWB has been the only grain shipper using the Port of Churchill, although the new owner of the rail line and Port has been actively pursuing shipments of non-CWB grains.

2.6 Prairie Direct

One of the most dramatic changes over the past 15-year period has been the increase in exports to the U.S. direct from prairie positions. In the 1984/85 crop year, one quarter of one percent of western grain movement went direct to the U.S. In the most recent year, that proportion has increased to 15% of grain shipments from Western Canada. In the past three years over three million tonnes of grain annually has been moving south and therefore is not available for shipment to port position.

3. WGTA and Ports

The *Western Grain Transportation Act* (*WGTA*) was passed in November 1983 and became effective in January 1994. This Act defined the environment for grain transportation in the "western division", from Thunder Bay to the Pacific coast, and provided an annual subsidy for grain movement to port position. This subsidy compensated producers for the removal of the Crow Rate, which had been established in 1897 for movement of western grain.

The *WGTA* also established the freight rate for statutory grains on the basis of distance from prairie point to Port. The distance based rates did not take into account the actual costs incurred by the railroads in moving grain to port positions. Total rail system costs were used to calculate the annual freight rates. Individual rail line or port efficiencies were not reflected in the rates. The only exception to the distance based rates established by the *WGTA* was a supplemental payment to CN (CN Adjustment) to defray the additional line related costs, over and above the system average, associated with the Hudson Bay line between Thompson Junction and Churchill and to provide for parity with Vancouver in the Prince Rupert rate.

The *WGTA* was repealed in 1995. The distance based rate structure for the maximum rate from prairie points to ports has been maintained since that time. The CN Adjustment was discontinued. CN no longer receives compensation to offset the rate for the extra distance required to deliver grain to Prince Rupert and the compensation to offset the extra costs to Churchill was discontinued.

Since the repeal of the WGTA, the trend to consolidation of country elevator positions and the construction of new high-throughput elevators on the prairies has accelerated. This has resulted in increased cleaning of grain in the country and greater utilization of unit train shipments to ports. There has also been a marked increase in livestock production and value added processing in Western Canada. These trends will continue as catalysts for change in the grain handling and transportation system.

4. Rail Developments

Rail systems in North America are becoming increasingly integrated due to a desire for efficiency in meeting the transportation needs of growing North American and overseas trade. Concentration is most significant in the U.S. where the number of Class 1 carriers has been reduced to seven (Dec. '97), which are supported by over 500 regional and short line feeders. In 1980 there were 37 Class 1 railroads in the U. S.

Canadian railroad efficiency has benefited from several initiatives since the introduction of the *National Transportation Act* (*NTA*) in 1988. The *NTA* introduced confidential contracts, competitive line rates, extended inter-switching, running rights and final offer arbitration. Rail freight subsidy programs such as the *WGTA* were eliminated in 1995. CN was privatized in 1995. The passage of the *Canada Transportation Act* (*CTA*) in 1996 streamlined the process to transfer or discontinue operating rail lines and encouraged the formation of short line railways. Since the *CTA* was implemented, CN and CP Rail have reduced their Western Canadian network of Class 1 rail track by 3,997 miles and transferred 3,007 miles of this track to short line operators.

In December of 1989, the definitive merger agreement was completed whereby CP Rail acquired the outstanding shares of the Soo Line Railway. This step completed the integration of the two railways. CP Rail now has direct access to U.S. midwest and eastern markets, including the Mississippi Waterway system at Minneapolis.

CN indicated its intention to purchase the Illinois Central Railroad (IC) in February of 1998. Verbal approval of the offer was received from the United States Surface Transportation Board in March of 1999, and final, written approval in May. The new integrated structure took effect July 1, 1999 and creates the fifth largest railway in North America. The merger provides access to major U.S. markets with service to Detroit, Chicago, St Louis (with access to the Mississippi), Memphis and Jackson, Tennessee, New Orleans (Gulf port) and Mobile. In April of 1998 a marketing alliance between CN, IC and Kansas City Southern Railway Company (KCSR) was announced. This alliance offers a coordinated rail network linking Canada with major midwest and southern markets in the U.S. It also gives shippers access to Mexico's largest rail system, Transportacion Ferroviaria Mexicana (TFM).

An important implication of this increased integration of the North American rail system is a greater ability to transport products by rail to and from all major markets and production areas. This has resulted in rail becoming an increasingly competitive option in long haul situations, which were previously served primarily by water.

5. Hopper Cars

Between 1972 and 1985 the government of Canada purchased approximately 13,000 hopper cars for the movement of grain. In addition to these purchases, the federal government entered into a long-term lease for the supply of an additional 2,000 cars, the governments of Alberta and Saskatchewan each purchased 1,000 cars and the CWB purchased 2,000 cars. The intent of publicly providing rolling stock was to ensure that capacity was available to meet the needs of Western Canadian grain producers. The railways supplement this fleet with railway owned and leased equipment to meet demands that fluctuate from crop year to crop year and within crop years. The total fleet is usually between 22,000 and 28,000 cars.

The government cars were originally designated for use in *WGTA* service in the western region only (from Thunder Bay to the West Coast). The cars were supplied to the railways with zero ownership costs. The maintenance of the cars has been the responsibility of the railways and was included in the eligible costs upon which rates were based. As demand for rail movement to eastern Canada and U.S. destinations increased, Alternate Use Agreements were entered into, whereby railways could use the federal government cars outside of the western region, and for non-statutory (non-rate regulated) movement within the western region, with payment of per diem rates for their use.

Most of this government fleet is made up of steel hopper cars with a capacity of 4,550 cubic feet. There are 2,000 aluminum hopper cars with a 4,100 cubic foot capacity. Recently, railways have constructed cars with a capacity of 5,150 cubic feet. As infrastructure improvements are made to rail lines, the industry standard will increase to maximize the capacity available.

6. Market Developments

Traditional markets for Canadian grain exports were served by shipping approximately 60% or our exports east through the Thunder Bay/St. Lawrence Seaway system and Churchill, and 40% west through Vancouver and Prince Rupert. Total exports have

averaged 24.2 million tonnes per year over the past 25 years. The pattern of export traffic has changed dramatically over this period, with the decline in demand to move grain east and the growth of demand in the Asia/Pacific region.

During the 1998/99 crop year (total shipments were 22.35 million tonnes; lowest in 10 years) 53% of shipments moved west, 32% east and 15% direct to the U.S. One year earlier, when total shipments were 26.8 million tonnes, that ratio was 57%, 32% and 11% respectively. The CWB projected directional movement of 65% west, 23% east and 12% south in "CWB Grain Trade Forecast to 2007-08". The CWB's forecast is currently being updated, and will likely be adjusted somewhat to reflect changes in trade patterns which have become evident in the past two years, but the trend is clear. From the perspective of Canadian ports, the increase in U.S. direct exports is particularly important, as it bypasses that sector of the system and therefore represents a net loss of business. On the other hand, this does represent growth of a premium market for Western Canadian producers and increased business for railways and trucking firms.

Agriculture and Agri-Food Canada, in their recent "Medium Term Policy Baseline" projections of Canadian exports forecast a modest export program. Table 10 illustrates the average exports for 1990 to 1998 and projections for 1999 to 2005.

TABLE 10
Export Projections – Six Major Grain and Oilseeds
million tonnes

Grain	90/98 average	1999	2000	2001	2002	2003	2004	2005
Barley	3.40	2.30	2.20	2.61	1.91	1.69	1.72	1.59
Flax	0.66	0.90	0.86	0.61	0.70	0.70	0.71	0.72
Rye	0.17	0.15	0.19	0.17	0.17	0.17	0.17	0.17
Oats	1.11	1.45	1.73	1.70	1.65	1.67	1.80	1.89
Canola	2.79	3.20	2.88	2.54	2.55	2.43	2.22	2.05
Wheat	16.40	13.80	14.28	14.04	13.89	13.84	13.83	13.75
Durum	3.43	3.90	3.55	3.98	3.75	3.62	3.85	3.88
TOTAL	27.96	25.70	25.70	25.63	24.62	24.12	24.28	24.06

Source: Agriculture & Agri-Food Canada, "Medium Term Policy Baseline"
Note: numbers may not add due to rounding.

These projections, based on a small country model, with the export market treated as a residual (after domestic consumption), indicate a fairly flat pace of exports for the major grains and oilseeds from Canada (includes eastern Canada) in the next six years. If this scenario holds true, and the demands for West Coast shipments and direct exports to the U.S. remain strong, the impact may be felt most with a possible further reduction in exports via the St. Lawrence Seaway system.

6.1 Diversification

The loss of the *WGTA* subsidy and subsequent increase in rail freight rates for export grains have encouraged the expansion of livestock feeding and value added processing of domestic production. Table 11 illustrates the change in industrial and feed use of the six major grains and oilseeds in Canada over the past 10 years:

TABLE 11
Feed and Industrial Use – Six Major Grains and Oilseeds
thousands of tonnes

Disposition	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98
Industrial Use	1 874	1 727	1 908	2 307	2 433	2 657	2 928	3 285	3 173	3 634
Feed*	13 328	12 203	12 425	12 458	12 419	15 747	15 814	15 821	16 419	16 508
TOTAL	15 202	13 930	14 333	14 765	14 852	18 404	18 742	19 106	19 592	20 142

Source: "Cereals and Oilseeds Review", Catalogue 22-007, Statistics Canada
Includes: wheat (&durum), barley, oats, rye, flaxseed and canola.
* includes waste and dockage.

There has been a 32.5% increase in the amount of grain used for feed and further processing in Canada in the past 10 years. These numbers from Statistics Canada include eastern Canadian use as well. The industrial use category is heavily weighted towards western Canada and is primarily canola, which has experienced a significant increase in domestic crushing. The balance of the industrial use is mostly malting barley, which has remained relatively constant over the period.

The increase in feed grain use has been experienced across the country. Western Canada has experienced a substantial portion of this increase, with the production of cattle and hogs steadily rising. According to Statistics Canada, Manitoba alone has seen an increase of close to 50% in the number of hogs on farms between 1993 and 1998, from 1,386,000 to 2,041,000 respectively.

6.2 US Competitive Options

A number of factors combine to create significant competitive pressure from U.S. ports. Lower taxes, public subsidies and lower cost of capital provide an advantage for operations and for developing infrastructure, compared to Canadian routes. Part of the US$218 billion *Transportation Equity Act for the 21st Century* (TEA21) infrastructure program to improve transportation systems may fund port gateway projects. State funding may be used to augment these federal funds.

In the United States, there are about 70 bulk export grain facilities with storage capacity exceeding 323 million bushels or 8.5 million tonnes. (Agricultural Transportation Challenges for the 21st Century – A Framework for Discussion, July 1998) This includes inland collection facilities as well as those located at tidewater. The U.S. Gulf and Pacific Northwest Ports play an important role in the handling of American export grain traffic. In 1996, the Gulf Ports accounted for 67 percent of the total, and the

Pacific Ports for 23 percent. The U.S. system enjoys adequate, and possibly excess, capacity at all major ports. Much of this capacity was built under government subsidy and support programs, which would not be permissible under current international trade conventions. (RL Banks report to TC, Sept/98). In Canada, a much higher proportion of the available storage capacity exists on farm and in country elevators than in the U.S. Canadian port facilities are designed for just-in-time logistics management, while U.S. port and collection terminals store large quantities of grain in advance of vessel loading.

US ports are federally regulated but not federally owned. Many ports are owned by and receive financial assistance from state and municipal governments. Generating revenue to cover operating costs and financing capital development programs is the individual port's responsibility. U.S. ports enjoy a greater range of financing options than do Canadian ports, including their ability to collect taxes (according to the March 1999 WESTAC Briefing, Seattle/Tacoma/Portland collect a combined US$50 million each year). In 1997, the use of revenue bonds accounted for more than 47% of all US port revenues, port services provided 30%, general obligation bonds 10% and loans and grants 8% of port revenues (WESTAC Briefing, March 1999). Canadian Port Authorities, on the other hand, cannot access government funding and guaranteed loans. They must pursue private sector capital to finance port projects.

Some significant differences exist in the marketing and handling of U.S. and Canadian grain at terminal position. U.S. grain is sold with less grade differentiation than Canadian grain, therefore it is usually in significantly larger lots, requiring fewer bins in terminals and permitting bulk storage in large silos. Canadian grain marketers often target niche markets with high quality grain, or grain with certain characteristics, necessitating more specialized handling of smaller quantities. Also, the standards for the cleaning of Canadian grain are more rigid and are maintained by the Canadian Grain Commission. These factors contribute to added expenses in handling grain at terminal elevators in Canada.

Very recently, Decatur, Illinois based Archer Daniels Midland (ADM) has asked its suppliers to segregate genetically modified (GMO) crops from traditional non-GMO corn and soybeans in order to preserve their identity throughout the marketing channel. Increasingly customers, especially European, are requesting and making purchases based on the genetic origins of crops. This added handling procedure may have a negative impact on the capacity and throughput of the U.S. system.

6.2.1 Mississippi/New Orleans

The Mississippi River and canal system dominates the transportation of bulk products in the central U.S. Extending about 1,700 miles, from Minneapolis to New Orleans, it has several navigable tributaries including the Ohio and Missouri Rivers. The Missouri River joins the Mississippi at St. Louis, the Mississippi's northernmost ice-free port. Grain is moved by barge to tidewater on the Gulf of Mexico. A typical covered grain barge is 195 feet long by 35 feet wide, with a 1,450 short-ton capacity. These barges are also used for northbound imports of commodities such as coal, chemicals and steel.

During periods when U.S. grain exports are low, both river barge carriers and elevator operators offer rates that are competitive with, or lower than, grain rates on the GL/SS. Barge rates typically peak in the fall with the heaviest demand and are at their lowest

levels in the late spring and early summer. User charges on the Mississippi are minimal due to the maintenance of the waterway by the US Army Corps of Engineers. The Corps of Engineers operates the locks and dams, controls river flow and depth, provides navigational aids, monitors channel navigational conditions, and continuously dredges waterways to maintain a navigable depth of nine feet on most waterways. The Corps of Engineers estimated that the U.S. Federal Treasury would spend approximately US$433 million in operations and maintenance on waterways in 1998. (Agricultural Transportation Challenges for the 21st Century – a Framework for Discussion, July 1998)

Since 1978, the barge industry has been taxed to cover part of the cost of new construction on the waterways. The *Inland Waterways Revenue Act of 1978* implemented a phased-in schedule of fuel tax rates ($0.04 per gallon in 1981, $0.20 per gallon in 1998) to establish the Inland Waterway Trust Fund. Since implementation, new projects such as lock and dam construction, have had a 50/50 funding split between the Trust Fund and the General Treasury.

Two options exist for movement of Canadian grain to the Gulf Ports. These are either all-rail to the Gulf or rail to Minneapolis or St. Louis and then barge from there to the Gulf. Barge rates are subject to significant volatility depending on demand. According to the USDA Agricultural Marketing Service, recent average barge rates from Minneapolis to New Orleans have fluctuated from as low as US$9.04 per ton in the second quarter of 1997 to US$20.12 per ton in the forth quarter of 1998. In the second quarter of 1999, average barge rates were US$10.40 per ton and increased to US$13.43 in July. From St. Louis to New Orleans, the average barge rates have ranged from US$3.59 per ton in the second quarter of 1997 to US$7.94 per ton in the third quarter of 1998. In the second quarter of 1999, the average rates were US$4.27 and increased to US$6.42 per ton in July.

Four of the top 10 barge firms – American Rivers Transportation Company, Peavey Barge Lines, Cargo Carriers Inc. and Bunge – are owned by ADM, Conagra, Cargill and Bunge respectively. These firms control 39% of the fleet collectively.

It is questionable as to how tolerant the U.S. Government would be to significant levels of Canadian grain shipments via barge, given the implicit subsidization (U.S. Army Corps of Engineers maintains barge route at no cost to users) that Canadian grain would thus be taking advantage of. If Canadian grain is to move to the Gulf Ports in substantial quantities, rail may be the most viable option, especially considering the increasing integration of the North American rail networks, and the positioning of both Canadian railways with significant trackage into the U.S. Canadian shipments through U.S. facilities may also encounter opposition at times of peak movement when the U.S. system is experiencing capacity constraints in handling its domestic crop.

The major tidewater grain handling facilities are located at the Port of South Louisiana, which encompasses a 52-mile stretch of the Mississippi River between New Orleans and Baton Rouge. The Port claims to handle 50% of the grain and grain byproducts exported from the United States and to be the largest grain exporting port in the world. The Port acts as a landlord for four grain terminals built with significant public support between 1967 and 1981. Two of the terminals are operated by ADM, one by Cargill and one operated by Peavey. ADM also operates a grain terminal at Ama, within the Port of South Louisiana and Zen-Noh Grain Corporation constructed a terminal at

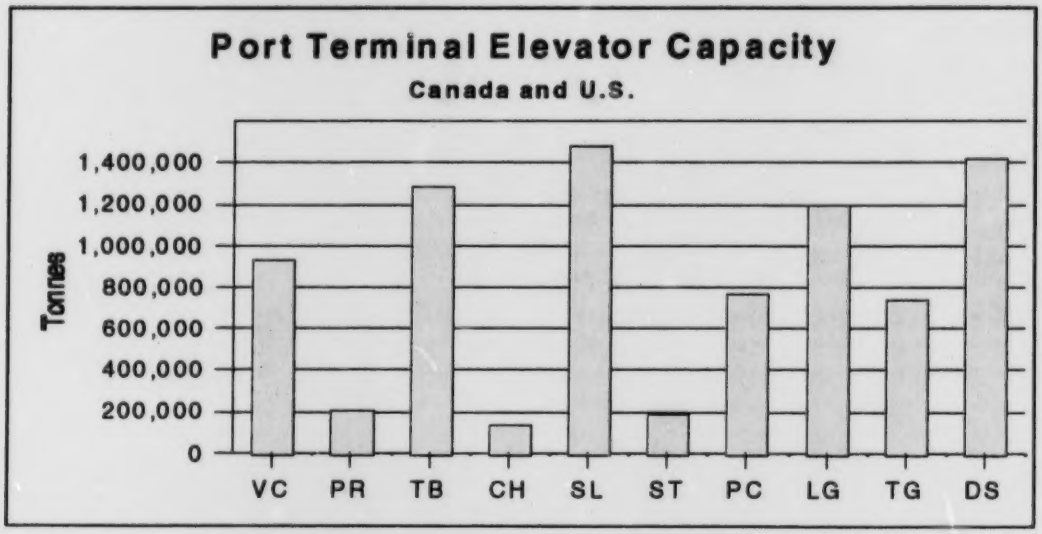
Convent in 1982 which can handle more than 10 million tonnes per year. Further upstream at Baton Rouge is another public grain terminal operated by Cargill. This facility, with an adjacent flourmill, primarily handles domestic grain. A 45-foot deep channel is maintained from Baton Rouge to the Gulf by the Corps of Engineers.

6.2.2 Duluth/Superior

There are six port elevators at Duluth, Minnesota/Superior, Wisconsin with a combined storage capacity of over 1.4 million tonnes. These elevators are located at the western tip of the Great Lakes/St. Lawrence Seaway system. Duluth/Superior is served by both CN and CP Rail. In Duluth, three elevators are owned by Cargill, General Mills and AGP Grain. In Superior, Cenex Harvest States, General Mills and Peavey own facilities. The Cenex Harvest States elevator at Superior is the single largest port elevator in North America with storage capacity of nearly 490 000 tonnes (Milling and Baking News). The terminal elevators at Duluth/Superior are limited to shipments in laker vessels and some Handysize salties, as is the case at Thunder Bay.

There are also a number of terminals located on the Texas Gulf Coast. Further from Canada by both rail and water, they are not likely to attract Canadian grain. Chart 3 provides a comparison of Canadian and U.S. terminal storage capacity at ports.

CHART 3:



VC – Vancouver
PR – Prince Rupert
TB – Thunder Bay
CH – Churchill
SL – St. Lawrence
ST – Seattle/Tacoma
PC – Portland/Columbia River
LG – Louisiana Gulf
TG – Texas Gulf
DS – Duluth/Superior

Source: Canadian Grain Commission, Transport Institute, University of Manitoba and Milling and Baking News.

6.2.3 Seattle/Tacoma

The Port of Tacoma claims to be one of the fastest growing ports in the United States. It is located, along with the Port of Seattle, in Washington State's Puget Sound and offers efficient connections to sea, rail, highway and air transportation networks. Grain and logs are the two most important commodities passing through the Seattle/Tacoma gateway. Two transcontinental railroads, Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) serve the Ports.

In 1911, the Washington State Legislature passed a law enabling municipalities to create port districts. At that time, railways or waterfront lumber mills owned most of the docks on Tacoma's Commercial Bay. Citizens voted to create the Port of Tacoma in 1918 and the Port officially began commercial shipping in 1921.

There is one grain terminal with storage capacity of over 3 million bushels or 80 000 tonnes at Tacoma. It is leased from the Port and operated as a joint venture between Cargill and Cenex Harvest States Co-op (formerly a joint venture between Continental and Cenex Harvest States). At Seattle, Cargill has operated a grain terminal with just over 100 000 tonnes of storage capacity. The U.S. Justice Department has ruled that Cargill must divest this facility, which is leased from the Port of Seattle, following Cargill's purchase of Continental Grain's assets. The Justice Department is concerned about concentration on a regional basis in the grain handling sector.

6.2.4 Columbia River/Portland

The Snake and Columbia River System draws grain from as far as Minnesota to export position in the Pacific Northwest. The actual Columbia-Snake inland waterway is 465 miles long and is formed by the eight mainstream dams on the lower Columbia and Snake Rivers. The inland terminus is the Port of Lewiston, Idaho. Six barge companies operate on the system, with Tidewater Barge Lines owning or leasing almost 80% of the grain capacity.

The deep-water ports on the lower portion of the waterway are served by a 40-foot minimum navigation channel which runs from the mouth of the Columbia River, more than 100 miles upstream to Portland, Oregon and Vancouver, Washington. Consideration is being given to deepening the channel to 43 feet to accommodate larger container and grain carriers. As with the Mississippi, the system of locks and levees is maintained by the U.S. Army Corps of Engineers at public expense.

The Port of Portland is located in Northwestern Oregon. Originally created in 1891 to dredge a deep-water shipping channel from Portland to the sea, its responsibilities now include ownership and maintenance of five marine terminals, as well as airports, business parks and a shipyard. The Port's maritime operation exports more wheat than any other port in the United States. Located near the mouth of the Columbia River, the Port of Portland claims to be the second largest grain exporting centre in the world. Four grain terminals with a combined storage capacity of nearly 400 000 tonnes are located at Portland.

Three more operating grain terminals are located on the north side of the Columbia River in the state of Washington, downstream from Portland. These terminals, at the towns of Kalama and Vancouver, have a combined storage capacity of approximately 365 000 tonnes.

The seven deep-water grain terminals are supported by 27 upriver elevators. Some 43% of U.S. wheat exports and a quarter of all U.S. grain exports move through this system. ("The Great Waterway"- Merchants Exchange & Columbia River Marketing Group, 1999) About 40% of the wheat delivered to coastal ports is transported by barge. The balance is moved by rail. BNSF and UP serve the tidewater ports.

Table 12 provides a summary of the grain facilities at the major U.S. Gulf and Pacific Northwest Ports.

TABLE 12
U.S. Port Grain Facilities and Capacity

Region & Port	Company	Storage Capacity tonnes*	Unloading Capacity tonnes/hour	Loading Capacity tonnes/hour	Berths - Length feet
Seattle/Tacoma					
Seattle	Cargill (to be divested)	103 418	1 633	2 000	1-1400
Tacoma	Cargill/Cenex Harvest States Co-op	81 646	2 177	2 177	1-450
Columbia River/ Portland					
Kalama	United Harvest	174 510	2 000	1 350	1-750
	Peavey	54 430	1 360	2 721	1-1088
Vancouver, WA	United Harvest	136 076	1 133	1 700	1-700
Portland	Cargill	220 000	Rail – 900 Barge – 900	2 500	n/a
	Cargill	40 823	Truck – 408 Rail – 680 Barge – 680	1 088	1-850
	Louis Dreyfus	48 988	750	875	Panamax Vessels
	Columbia Grain	87 089	1 814	1 814	1-900
Louisiana Gulf					
New Orleans	Cargill (Westwego)	100 000	2 000	1 500	2-800, 1200
	Cenex Harvest States (Belle Chasse)	170 000	n/a	n/a	n/a
Port of South Louisiana	Cargill (Reserve)	163 290	2 720	2 720	2-600
	Bunge (Destrehan)	68 000	n/a	n/a	1-800
	ADM (Ama)	136 076	1 632	2 721	1-750
	Peavey (Paulina)	54 430	816	1 089	1-500
	ADM (Destrehan)	136 076	1 361	2 177	1-650
	ADM (Reserve)	92 976	1 089	2 177	1-650
	Zen Noh Grain (Convent)	108 861	2 812	3 000	1-1200
Baton Rouge	Cargill (Port Allen)	163 000	n/a	n/a	n/a
Texas Gulf					
Galveston/ Houston	Farmland (Galveston)	88 000	1 666	2 000	1-1000
	Cargill (Houston)	170 000	n/a	n/a	n/a
	Port of Houston (Galena Park)	170 000	n/a	n/a	n/a
Corpus Christi	Port of Corpus Christi	81 000	n/a	n/a	n/a
	Interstate Grain	122 000	n/a	n/a	n/a
Brownsville	Port of Brownsville	27 000	n/a	n/a	n/a
Beaumont	Continental (not acquired by Cargill)	85 000	n/a	n/a	n/a

Source: "The International Competitiveness of Western Canadian Transportation" – Transport Institute University of Manitoba, November 1994, "The Great Waterway" - Merchants Exchange & Columbia Snake River Marketing Group, Cargill, Public Affairs, Milling and Baking News.
* - bushels converted to tonnes using wheat as the basis for conversion.

6.3 US Grain to Canada

There are various scenarios under which U.S. grain comes to Canada. American grain can be delivered directly into the Canadian elevator system to buyers in Canada. Vessel shipment from Midwest States, via the Seaway, to transfer elevators in the St. Lawrence River is another option. Grain is also routed from U.S. origination points, through Western Canada to take advantage of lower freight rates, and returns to the U.S. from British Columbia in order to be delivered to port in the Pacific Northwest or to customers as far south as California.

Foreign grain is currently permitted to enter Canadian elevators (primary, terminal and transfer) subject to approval of the Canadian Grain Commission (CGC). The CGC approval attaches conditions that are considered necessary to protect Canadian grain quality, such as forbidding mixing of U.S. with Canadian grain (some exceptions have been made for canola). These approvals have been provided on a case by case basis.

The Wheat Access Facilitation Program was implemented on January 1, 1999, to clarify the rules and enhance the opportunities for U.S. grain sellers in eligible states (currently Montana and North Dakota) to sell wheat directly to buyers in Canada. A seller must obtain a phytosanitary certificate for his/her wheat, arrange a sales contract (covering price, quantity, quality, delivery, currency of payment and other terms) and complete normal Customs formalities before trucking the wheat to a participating Canadian country elevator. A Canadian Grain Commission representative will be available at the elevator to take a sample for information purposes. This is to ensure that the elevator follows the procedures for the program to ensure that the U.S. and Canadian wheat are not commingled.

U.S. grain can be shipped anywhere in Canada, including to terminal elevators at export position. If the grain goes to a Canadian terminal, the CGC applies similar procedures to ensure that it is kept separate.

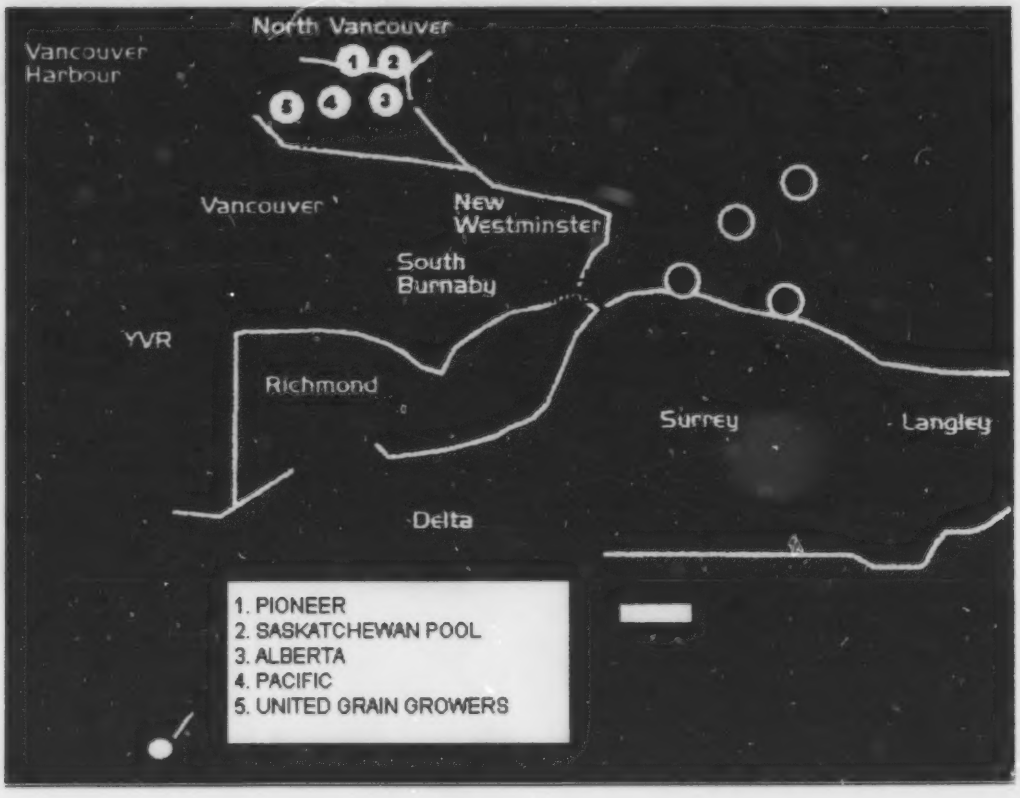
Due to the lack of competition to railway routes and high freight rates in the northern tier states, some shippers find it advantageous to route grain trains through the Canadian prairies to capture lower freight rates. The current attractive exchange rate adds to the appeal of this option. CP Rail was hauling 400 to 500 cars a month in 1994/95, when this routing was halted due to concerns regarding disease. The movement fell to about 500 cars per year for the next three years. The US Department of Agriculture (USDA) and the Canadian Food Inspection Agency have been involved since that time developing and implementing procedures for U.S. grain shipments through Canada. The USDA issues a certificate of origin for each shipment and hatches are sealed on the cars. The program is restricted to grain from Minnesota, North Dakota and Montana. Since January 1999, about 600 cars per month have been moving through Canada, usually in 25 car blocks. About 80% of this movement goes west, routed into Canada at North Portal (some at Emerson) and returning to the U.S. at Kingsgate. Much of this grain is feed barley destined for the California feed market. The remaining 20% is primarily wheat moving through eastern Canada to New England. This grain is routed through Chicago to Detroit where it enters Canada. It returns to the U.S. at Niagara Falls or Rouses Point (south of Montreal).

PORT ANALYSIS

7. Vancouver

7.1 Background

There are five grain terminals located on Vancouver Harbour. Cascadia (Agricore and Cargill), Pacific (Agricore and SWP), and United Grain Growers are located on the south shore. Richardson and Saskatchewan Wheat Pool are located on the north shore. Two bulk handling facilities, Neptune Bulk Terminals and Vancouver Wharves, also ship grain and grain products. Four railways service the Port. CP serves the south shore. CN serves the north shore. BC Rail delivers all of its traffic to the north shore where it is interchanged to CN for delivery to terminals. BC Rail does not service any terminals directly. Burlington Northern enters Vancouver from the south, does not service any terminals and carries negligible grain traffic. CP and CN must interchange significant numbers of grain cars to meet the demands of marketers and to balance proportionate unload requirements. Cars are generally interchanged from CP to CN at Sapperton yard, and from CN to CP at Glen yard.



The Canadian Wheat Board ships about 75% of the grain that moves through Vancouver. The balance is non-CWB grain and specialty crops marketed by the private grain companies. The division and distribution of these cars at the Port is based on: pooling for CWB grains, with the railways attempting to deliver cars to terminals in the same proportion that they were loaded by that company in the country; a car exchange for canola, based on the same principle and managed by the BC Terminal Elevator Operators; and direct commercial relations, with cars being delivered to the terminal designated by the shipper. The pooling and car exchange programs are intended to reduce the switching necessary, while maintaining an equivalent proportion of grain handle for all shippers.

The Canadian Ports Clearance Association, or CPCA (formerly BC Grain Shippers' Clearance Association) tracks incoming sea vessels, assigns them seniority for loading and assigns vessels to specific terminals for specific loads of CWB grains. Although seniority is a consideration with assignment of vessels, the key factor is the availability of the right grain to be loaded.

Grain constitutes approximately 20 percent of the volume of product shipped through the Port of Vancouver. The Vancouver Port Authority indicates that 10,700 persons are directly employed and another 17,300 jobs are indirectly created by or induced by the Port. 27% of terminal-related jobs are attributed to grain, with a resulting gross domestic product of $1.68 billion.

7.2 Strengths and Opportunities

The Port of Vancouver is the largest port in Canada and handled 71.9 million tonnes of cargo in 1998. It provides Canada's main gateway to Asia and the Pacific Rim. Grain terminal facilities are capable of handling a wide variety of products, including those that require specialized handling. Capacity for handling containers at Vancouver continues to grow.

7.2.1 Direct Hit/Specialized Handling

Vancouver terminals have all installed "direct hit" facilities so that vessels can be loaded with grain cleaned to export standard in the country, without having to be elevated and stored in the terminal. This provides the opportunity to efficiently load vessels without utilizing storage capacity or being hampered by high stock levels in the terminal. In theory, the grain for direct hit vessels should arrive on unit trains from the country timed to move into the port and be loaded directly to vessel. This does not always happen and there are occasions when the railway is asked to stage or store the unit trains en route due to delays in vessel arrivals.

Vancouver Wharves (owned by BC Rail) has invested in a bulk handling facility that will provide a "soft handling" capability to load specialty crops and products such as peas and malt. They indicate that this is not a response to perceived capacity constraints at Vancouver, but rather a belief that a niche market exists for this kind of gentle handling of products. With limited storage facilities, these products will have to move through on a direct hit basis.

7.2.2 Commercial Relations

Establishing contracts for performance throughout the transportation and handling system, with financial penalties and incentives, is widely seen as a way to improve throughput at Vancouver. It is suggested that the market system would self regulate quickly if sufficient charges were applied to any participants who displaced products needed by terminals and waiting vessels.

7.2.3 Containers

Further containerization of grain and grain products will provide more opportunities for Vancouver. Currently 20% of Vancouver container exports are grain products. This business is projected to increase through greater shipments of value-added and premium identity preserved products.

7.3 Issues, Challenges and Impediments

7.3.1 Congestion

Congestion of traffic in the BC lower mainland and the complexity of relationships and delivery requirements for grain, present significant operating problems and a loss of capacity in the Port of Vancouver. The physical limitations of rail yards for storing and switching cars and the demands of shippers of all other commodities, place strains on railway operations, particularly in the post-harvest period, when the largest proportion of grain sales are made. Grain trains arriving from the country, in most instances, must be broken or switched into blocks for delivery to terminals, or for interchange to the other railway. Terminals, at times, have limited storage capacity available due to cleaning requirements, numbers of grains and grades in store, lack of vessels, etc. Any cars incorrectly spotted at terminal or carrying a grain or grade, which the terminal is unwilling/unable to unload at that time, will be "run-out" if no storage is possible on the small terminal sidings. This necessitates greater handling and sorting delays. While selective investments in infrastructure and improved systems could alleviate some of the congestion problems, the density of residential and commercial development in the Vancouver area makes expansion of existing facilities less likely. When operational disruptions substantially decrease the flow of grain to Vancouver, waiting vessels and demurrage accumulate.

7.3.2 Proliferation of Grains and Grades

To further exacerbate the difficulty of delivering grain to terminals, the number of grains and grades handled continues to increase. The production and marketing of non-CWB and specialty crops is increasing. Much of this product is shipped through the Vancouver facilities. Marketers are increasingly buying grain in the country and selling to offshore customers with tighter specifications. Further distinction will place an increased strain on the terminals' ability to handle the product. As the number of grains and grades increase, the working space in terminals is depleted. The ability to market product on the basis of tight specifications is seen as an advantage and opportunity for Canadian producers. It is suggested that this segregation and sorting be done closer to the source. There is not enough land alongside tidewater to do it at Port.

7.3.3 Storage Capacity

Although the terminals claim otherwise, many parties feel that the storage capacity at Vancouver terminals is insufficient. The demands of an increasing number of grains and grades reduce the effective working space. Terminal managers want to ensure that grain and grades are on hand to meet upcoming vessel requirements, and therefore will hold as wide a range of grain separations as possible. This often results in smaller lots being available in any one terminal and the necessity to berth vessels a number of times, causing delays and adding berthing charges.

7.3.4 Level Playing Field with U.S. Ports

Achieving a level playing field with the Pacific Northwest Ports, as well as Gulf Ports in the US, is a major concern to Vancouver stakeholders. As operational difficulties limit the ability to achieve target throughput levels at Vancouver, shippers consider other options. Lower capital investment charges and local taxation advantages enjoyed by Pacific Northwest Ports provide an incentive for investment in facilities that may attract Western Canadian bulk commodity exports. The TEA 21 infrastructure program in the US may provide $218 billion over six years for transportation infrastructure. It is not yet known how these funds will be allocated, but some of this money may be directed toward ports and to intermodal connections. With difficulty in increasing the infrastructure at Vancouver and little money to do so if it were possible, Vancouver's challenge is to become more efficient within its current structure.

7.3.5 Information Management

It has been proposed that better information management would benefit the Port of Vancouver. The ability to better coordinate the grain programmed in the country and subsequently arriving at Port with vessel demands by using current data transfer technology, including the Internet, has been suggested as a way to improve throughput within the current infrastructure. The time lag of between three and four weeks between order/allocation and arrival at port exacerbates this shipper concern. The Task Force heard the opinion that an opportunity was lost during the Estey process. Justice Estey referred to a Grain Czar, which received a negative response from stakeholders. If Estey had proposed an information coordinator, the reception of this concept might have been better. From some parties' perspectives, less information is available now than was available under the *Western Grain Transportation Act* regime.

7.3.6 Grain Identification/Grading Technology

The increasing grain and grade separations and the introduction of genetically modified varieties make visual identification more difficult and in cases impossible. The Canadian Grain Commission (CGC) will need to address the issue of new technologies to handle the wide variety of grains in the future.

7.3.7 Labour

Historically, labour disruptions have had a highly visible impact on Vancouver throughput. When the system either slows or shuts down due to the actions of railway, grain terminal, long-shore or CGC staff, the resulting backlog of ships waiting for grain is likely to accumulate significant demurrage bills, which are eventually passed along to the farmers.

On January 1, 1999, amendments to Part I (Industrial Relations) of the *Canada Labour Code* came into force. One provision of the modernized code is that during a strike or lockout, employers and employees in the long-shoring and tugboat industries must continue to provide normal service to the tie-up, let-go and loading of grain vessels at licensed terminal and transfer elevators, and to the movement of the grain vessels in and out of ports.

Although grain handler and long-shore wage rates are lower at Vancouver, Pacific Northwest terminals employ far fewer staff compared to Vancouver facilities. Vancouver does provide added services such as cleaning. It was estimated by some parties that the Task Force met with, that Vancouver terminals could get by with significantly fewer employees than they currently have.

7.3.8 Infrastructure Financing

Capital investment charges in the Pacific Northwest are financed by US Port Districts through the issuance of tax exempt special obligation bonds. In Canada such investment is privately financed at market rates. US Port Districts can, by law, levy taxes on property owners, with the revenue from such taxes dedicated to repay the principal and interest on the general obligation bonds used to finance general port infrastructure. The port system in Canada is not structured to collect taxes at the local level.

7.3.9 Taxation and Marine Charges

Municipal taxation in Vancouver is estimated to be between two and ten times higher than that assessed competing bulk commodity terminals in the Pacific Northwest (according to the Greater Vancouver Gateway Council). In the US, port infrastructure is subsidized by residents. In Canada, ports are seen as generators of tax revenues. The Province of British Columbia determines the tax classification and the effective property assessment for each of the grain terminals, with the municipal district establishing the mill rate.

Table 13 provides a comparison of the shipments of grain and the total municipal taxation for the five grain terminals at Vancouver for the past 14 years. The taxes are also expressed as an average per terminal. In the low-volume years of the mid-1980s, the taxation paid per tonne shipped was relatively high. From there it fell to as low as $0.33 per tonne and has increased over the past decade to be fairly constant for the past few years at close to $0.50 per tonne.

TABLE 13
Vancouver Grain Shipment vs. Municipal Taxation

Year	Shipments (tonnes)	Total Municipal Taxation (dollars)	Municipal Taxes per Tonne Shipped (dollars)	Average Municipal Taxation* (dollars)
1985	9 269 000	5,250,978.00	0.57	1,050,196.00
1986	10 377 000	5,299,813.00	0.51	1,059,963.00
1987	12 924 000	4,276,143.00	0.33	855,229.00
1988	12 518 000	4,627,492.00	0.37	925,498.00
1989	9 270 000	4,850,027.00	0.52	970,005.00
1990	11 142 000	5,299,170.00	0.48	1,059,834.00
1991	13 452 000	5,328,814.00	0.40	1,065,763.00
1992	14 520 000	5,661,093.00	0.40	1,132,219.00
1993	12 329 000	5,797,151.00	0.47	1,159,430.00
1994	14 358 000	6,025,276.00	0.42	1,205,055.00
1995	12 060 000	6,023,850.00	0.50	1,204,770.00
1996	12 249 000	5,970,671.00	0.49	1,194,134.00
1997	12 367 000	6,010,948.00	0.49	1,202,190.00
1998	11 039 000	5,939,311.00	0.54	1,187,862.00

Source: Vancouver Port Authority; BC Assessment
** average for five terminals.*

Provincial property and fuel taxes on Canada's national railways and their impact on the competitiveness of export commodity trade is of concern to a number of the parties that the Task Force met with. Railways are assessed fuel taxes by each province that their trains cross, irrespective of whether fuel is purchased in that province or not. Some reductions have been implemented, by British Columbia for property taxes and by Manitoba and Alberta for fuel taxes, in recent years.

The cost of pilotage is seen as an impediment to the Port of Vancouver. The service is provided by a regulated monopoly. It was suggested that if new technology was used more efficiently, costs could be reduced. Competition for contracts to provide the service could lower costs. The Canadian Transportation Agency has just completed a review of pilotage in Canada, and submitted a final report to the Minister of Transport.

The shift to cost recovery for marine service is an irritant to system participants. Parties complain that they continue to pay high taxes and are now being asked to pick up these additional fees. There is no mechanism from the marketplace to provide adjustments to the fees to reflect the cycles in commodity markets, such as grain and coal, which are currently depressed.

7.3.10 Urban Encroachment

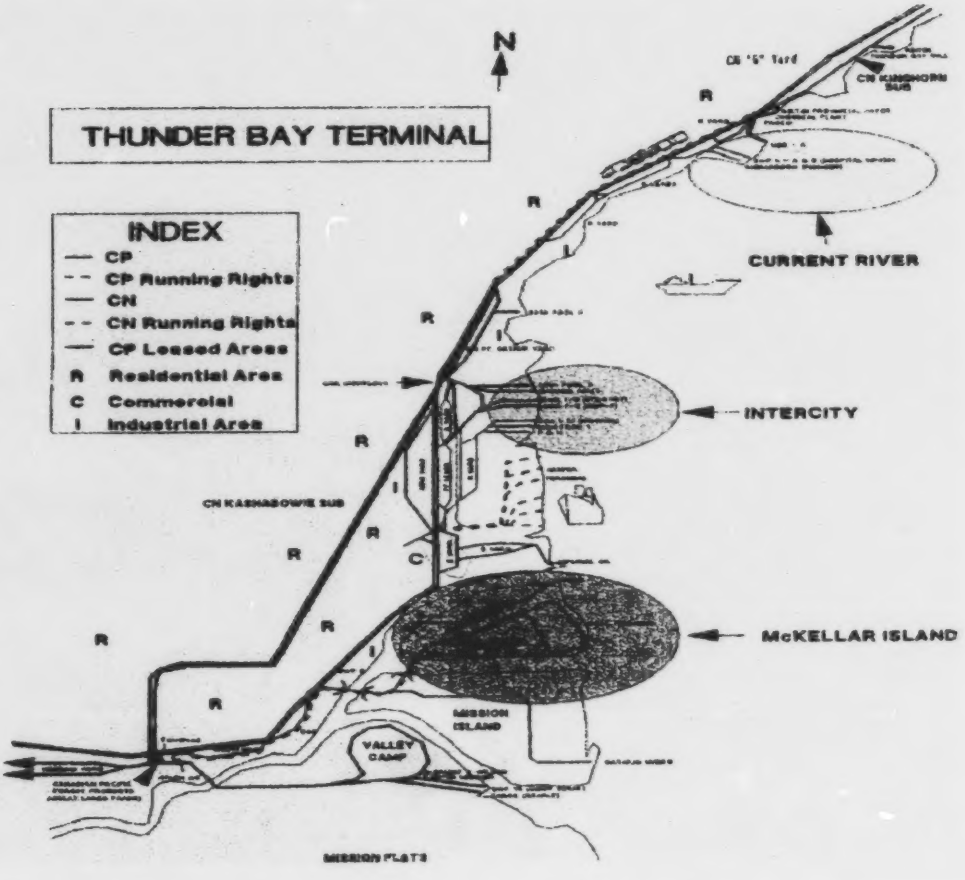
The conflict between Vancouver as a port and as a city of commerce is seen as a threat to bulk commodity movement. Environmental concerns limit development of port facilities. Residents' concerns about noise, unsightly structures and pollution frustrate stakeholders. Waterfront land is a highly valued asset. There is more and more pressure to increase housing and recreational use and decrease low-density use of

such land. It must be recognized that a critical mass is needed to attract more business and players to the Vancouver gateway. If traffic is diverted to the U.S., the Canadian infrastructure is threatened. Most Vancouver port interests feel a strong need to protect the National route, and avoid being subject or captive to shifting U.S. priorities.

8. Thunder Bay/Seaway

8.1 Background

Thunder Bay was once the primary export port for Western Canadian grain products. Although its importance has declined in recent years, it still handles a large amount of the grain exported from Western Canada. There are seven licensed terminal elevators remaining in Thunder Bay, owned by six grain companies (Agricore, Cargill, Parrish & Heimbecker, Richardson, Saskatchewan Wheat Pool and United Grain Growers). UGG still operates two terminals. Two bulk handling facilities, Thunder Bay Terminals Ltd. and Valley Camp, periodically handle grain and specialty products. Both CN and CP serve Thunder Bay, although no terminals are served by both railways. There is a requirement for many interchanges between the railways to balance the country origination formulas and meet the needs of terminals in handling their non-CWB and non-poolable products.



A great deal of consolidation and attrition has taken place in the fleet of lake vessels (lakers) in the past 10 years. Four companies remain operating: Seaway Bulk Carriers, N. M. Paterson & Sons Ltd., Parrish & Heimbecker and Groupe Desgagnés Inc. Seaway Bulk Carriers, which operates vessels owned by Algoma Central Corporation and Upper Lakes Group Inc., has 21 vessels. Paterson has seven vessels and P & H has two vessels. Groupe Desgagnés has three smaller vessels which carry grain. During periods of low shipping volume, a number of these vessels are not in service. More vessels are put into service to meet the post-harvest demand when throughput at Thunder Bay peaks.

The Lower St. Lawrence Ports serve as transfer points where wheat and other grains are unloaded from laker vessels into elevators and then from the elevators onto ocean-going vessels for transport overseas. Both Canadian grain downbound from Thunder Bay and U.S.-origin grain downbound from Duluth and other points pass through these ports. The Bunge terminal at Quebec City also receives some export Canadian grain directly by rail from the prairies.

Four of the eastern ports – Port Cartier, Montreal, Quebec, and Baie-Comeau each account for 20% or more of the total grain handled. Trois-Rivières and Sorel each handle about 5% of the total tonnage. All of the ports handle Canadian origin grain. All of the ports, except for Montreal, also receive U.S. origin grain, with Baie-Comeau receiving the highest tonnages. Much of the U.S. grain handled at these ports is barley, corn, oilseeds, etc., rather than wheat.

Thunder Bay handled between seven and 10 million tonnes of grain in each of the past four years. This constitutes from 68% to 76% of the total volume of commodities handled by the Port. According to "A Competitive Vision for the Great Lakes St. Lawrence Waterway", prepared by the Canadian Shipowners Association and the Chamber of Maritime Commerce, for each million tonnes of grain handled at the Port of Thunder Bay, 120 full-time equivalent jobs are created. This indicates that between 840 and 1200 jobs in the port are dependent on the grain movement. The terminal elevators themselves have a total payroll of about 500, although the actual number of working employees fluctuates during the year depending on the volume of grain being handled.

8.2 Strengths and Opportunities

8.2.1 Available Capacity

The Thunder Bay and St. Lawrence grain terminals can gear up their operations and capacity in very short order to meet surges in grain movement. This happens annually when the Ports adjust from low volumes during the summer to a three-month peak prior to the close of navigation. These Ports can also respond quickly at other times of the year to meet increased sales demand or to relieve pressure on other parts of the system. The bulk handling facilities at Thunder Bay also have excess capacity that can be utilized for grain shipments.

Sufficient infrastructure is in place both in Thunder Bay and the St. Lawrence to provide extra storage capacity for grain. This storage can assist in preparation for sales programs and in relieving congestion problems at country delivery points.

Shipment of bulk commodities by water is the most environmentally friendly option. Fuel consumption is lower than that required for road or rail transport modes and the resulting emissions are less.

8.3 Issues, Challenges and Impediments

8.3.1 Low Volumes

The declining volume of grain, flowing from the prairie to Thunder Bay for furtherance to eastern transfer elevators or export markets, is seen as the greatest threat to the Port and Seaway system. In calendar year 1998, only 7.44 mmt moved through Thunder Bay. The terminal divisions of some grain companies lost money. The previous year 10.2 mmt was shipped through the Port. This level of throughput resulted in positive returns for terminal operations. Although it is difficult to determine with certainty, Port interests estimated that 8 to 10 mmt per year would be the minimum level of grain needed by Thunder Bay terminals to continue operations without further consolidation.

8.3.2 Rail Freight Rates

There is recognition among Thunder Bay and Seaway stakeholders that shifting markets have resulted in a decline in volumes flowing through the Port and Seaway. There is also a strong belief that the railways are using unfair pricing practices to lure grain away from the Port. The regulated rate, coupled with ownership costs of publicly provided cars not being included in the maximum rate, is believed by some stakeholders to be generous enough to allow a cross subsidization of the freight rates offered into eastern Canada on through-shipments. From the prairie midpoint to Thunder Bay the rate is $34.45 per tonne. From Thunder Bay to Quebec, a greater distance, the railways are apparently charging $18 per tonne. (Note that the Thunder Bay catchment area is primarily further east than the prairie midpoint, with corresponding lower freight rates per tonne, e.g. Weyburn, a distance of 764 miles, has a rate of $27.31 per tonne.)

While shippers want freedom of choice, including choice of carriers, Seaway interests argue that it is important to implement a distribution system based on fair market rules. In response, the railways point to significant efficiency gains which they have made, the relatively higher cost of the origination portion on branchlines, as well as the logistical efficiencies directly associated with unit train shipments railed from the prairies directly to the lower St. Lawrence.

8.3.3 Alternate Routes/Modes

The CWB moved grain direct from the country to eastern Canada this past summer. Approximately 100 000 tonnes was programmed. The increase in high throughput elevators on the prairie, with equipment capable of cleaning to export standard, and the installation of cleaning equipment at the Quebec transfer elevator make such movement possible. In addition, there was a program of five trains (total of 45 000 tonnes) move through Valley Camp, bypassing the terminal elevators. Thunder Bay interests express concern that these decisions in pursuit of short-term opportunities threaten the viability of the Port with the potential of further reduction in the size of the laker fleet and terminal capacity. The Canadian Wheat Board indicates that it cannot ignore the changing economics of grain movement and as a commercial organization, it examines the competitiveness of all shipping options.

8.3.4 Railway Service

The terminal managers expressed a great deal of dissatisfaction with the level of service received from both CN and CP at Thunder Bay. They feel the service has declined significantly with cuts to railway crews and yard assignments. Interchanges between the railways are slow.

8.3.5 Fewer Lakers

Declining demand has resulted in a significant permanent reduction in the number of lake vessels for handling grain. The last vessel built was in 1985, when the "Paterson" was commissioned. If demand continues to fall, more vessels will be removed from the fleet. This will make it difficult for Thunder Bay and the Seaway to respond to future surges in volume. Laker interests feel that this situation has been exacerbated by the increase in ocean-going vessels (salties), which also handle shipments from Thunder Bay terminals. The salties primarily load non-CWB and specialty products for direct export shipment, thus avoiding extra elevation and handling charges at eastern transfer elevators. These shipments further diminish volumes available for lakers to haul. The Shipping Federation counters that the growth in non-CWB shipments through Thunder Bay corresponds to the growth in saltie shipments and presents an opportunity to strengthen the Seaway route.

While longer-term choices should be based on market conditions, the historical contribution of the lake fleet, the impact on other domestic movements such as iron ore and the employment in Canada must be considered important factors.

8.3.6 Fluctuation in Demand

The concentration of demand in the October to December, post-harvest period poses ongoing problems for the parties operating at Thunder Bay. Terminals must gear up manpower and facilities for a three-month period before the winter shutdown. Vessel owners must respond to a very short shipping spike.

The increasing shift to short term accountability by system participants results in players being reluctant to enter into long-term commitments for lake freight. This forces vessel owners to look for other opportunities for their assets. As this trend continues, vessel owners are less likely to have boats available for grain, especially during the peak demand periods.

8.3.7 Proliferation of Grains and Grades

The increasing number of grain and grade separations required to meet marketing programs puts a strain on the available working space in Thunder Bay terminals. This is not as large a problem as experienced at Vancouver, but it does impact on throughput, especially in the post-harvest crunch.

8.3.8 Taxation and Marine Charges

The high level of municipal taxation is a major issue for Thunder Bay operators. Table 14 provides a comparison of the shipments of grain and the total municipal taxation for the seven grain terminals at Thunder Bay for the past 15 years. The taxes are also expressed as an average per terminal.

TABLE 14
Thunder Bay Grain Shipment vs. Municipal Taxation

Year	Shipments (tonnes)	Total Municipal Taxation (dollars)	Municipal Taxes per Tonne Shipped (dollars)	Average Municipal Taxation* (dollars)
1984	16 602 617	4,395,375.00	0.26	627,911.00
1985	12 001 791	4,540,973.00	0.38	648,711.00
1986	12 497 902	4,842,805.00	0.39	691,829.00
1987	14 679 414	5,263,478.00	0.36	751,925.00
1988	11 178 128	6,374,175.00	0.57	910,597.00
1989	7 008 114	6,922,005.00	0.99	988,858.00
1990	9 008 213	7,558,476.00	0.84	1,079,782.00
1991	12 962 313	7,988,811.00	0.62	1,141,259.00
1992	8 708 222	8,389,823.00	0.96	1,198,546.00
1993	8 157 168	8,497,056.00	1.04	1,213,865.00
1994	10 491 337	7,307,203.00	0.70	1,043,886.00
1995	8 568 199	6,284,052.00	0.73	897,722.00
1996	7 663 645	6,659,205.00	0.87	951,315.00
1997	10 193 857	6,646,375.00	0.65	949,482.00
1998	7 440 351	6,597,952.00	0.87	942,565.00

Source: Thunder Bay Port Authority; City of Thunder Bay, Revenue Division
** average for seven terminals.*

The taxation per tonne shipped through the Port was as low as $0.26 in 1984 and has reached as high as $1.04 in 1993 when the taxation peaked in absolute value as well. The terminal managers feel that their facilities pay a disproportionate portion of city taxes. They are making some headway with appeals to previous tax assessments and application to have rates lowered. Since 1993, the taxation has been reduced somewhat. A move by the Province to "Actual Value" taxation has provided a new argument as to the real value of the terminals.

Cost recovery and user pay policies have resulted in an increase in Port Authority and marine service costs. The harbour dues on bulk grain shipments paid to the Thunder Bay Port Authority are currently $0.08 per tonne, which is not high, but terminals are unsure what future dredging costs may do to these rates.

8.3.9 Information Management

The information exchange concerning vessels is felt to be insufficient by the terminal managers. Information on arriving vessels and tonnage requirements is transmitted from the CWB to the Winnipeg office of the Canadian Ports Clearance Association, or CPCA (formerly Lake Shippers Clearance), from where it is transmitted to the Thunder Bay office of the CPCA. Finally it is provided to terminal management. Terminals often do not know what shipping they will be assigned for the next day until late in the afternoon. This makes it difficult to plan shifts, especially on weekends. The Canadian Wheat Board indicates that it has improved its information flow to the terminals in the form of a weekly shipping list, and has indicated a willingness to expand the amount and regularity of the information it provides.

8.3.10 Appeal Process

Concern was expressed that the appeal mechanism in the *Canadian Transportation Act* is not available to the general public or to third parties such as ports. The arbitration provisions between shipper and carrier prevent a third party, such as a vessel owner, from intervening in rail rates that they feel are predatory. It is also felt that the appeal process is not fast enough.

9. Prince Rupert

9.1 Background

Prince Rupert Grain Ltd. was built on Ridley Island in the mid 1980s and is one of the most modern, efficient grain terminals in North America. It is owned by five major grain companies (Agricore, Cargill, Richardson, Saskatchewan Wheat Pool and United Grain Growers). Prince Rupert Grain Terminal is served exclusively by Canadian National. The rail line is well built, well maintained, has the lowest grade of any line going to the West Coast and is vastly underutilized. CN delivers 102 car trains from its mainline to a receiving and departure yard adjacent to Prince Rupert Grain Terminal. The CWB is the primary seller of the grain that moves through Prince Rupert Grain. The CWB coordinates vessel arrivals at Prince Rupert Grain as part of its overall West Coast program. There has been an increase in non-CWB grains moving through the Port in the past two years, but the volume remains relatively small. Grain shipped from country elevators to Prince Rupert primarily originates on CN lines. Within the past year, CN and CP Rail have established an interchange agreement which allows CP grain to move to Prince Rupert Grain. Fairview AgPort is a bulk loading facility owned by Prince Rupert Port Authority, located in the City of Prince Rupert.

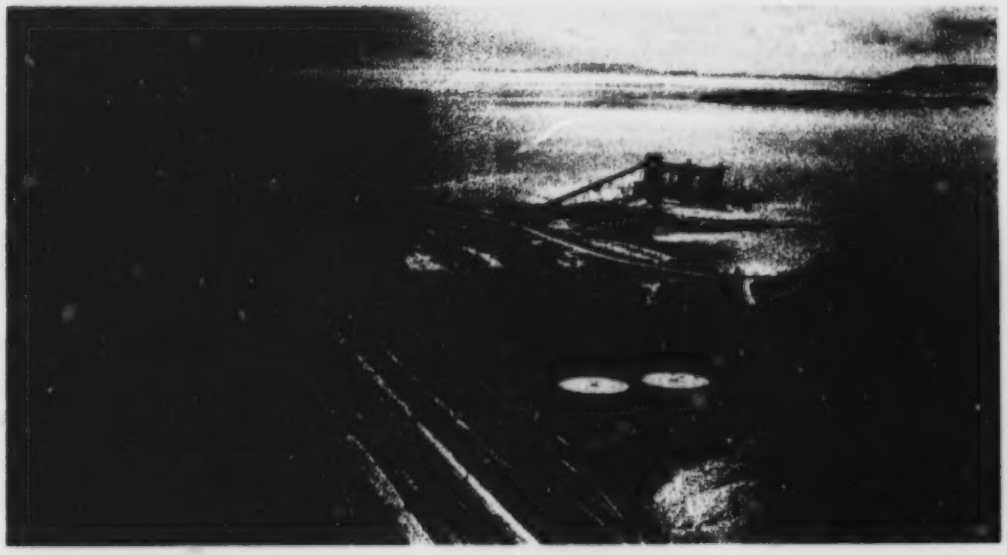


Photo courtesy of Prince Rupert Grain Ltd.

The Prince Rupert Grain terminal was built as a state-of-the-art grain handling facility by six (at the time) major grain companies, with the financial backing of the government of Alberta through its Heritage Savings Trust Fund and general revenues. In 1983/84, first mortgage bonds were issued for $106 million at 11% interest (compounded semi-annually with an effective rate of 11.3%) and Series A debentures of $125 million ($11 million was refunded for project costs) were issued for a total debt of $220 million. The first mortgage bonds are due in 2015 and as of November 1, 1998 had $93.5 million principal and $42.9 million interest outstanding for a total of $136.4 million. The $114 million outstanding from the Series A debentures is due in 2035. The total debt is currently over $250 million.

The volume of grain handled by Prince Rupert Grain in the 1998/99 crop year was only 1.3 mmt, or about 11% of West Coast total volume of 11.8 mmt. Prior to the removal of the CN Adjustment, Prince Rupert Grain handled between 26 – 28% of West Coast shipments. For the three years prior to 1998/99, Prince Rupert Grain maintained proportional movement in the same range as under the *WGTA* regime. This year that proportion has been halved.

During the past three years Prince Rupert Grain has been closed one third of the time (13 out of the past 39 months). Prince Rupert interests express frustration at not reaping the marine transportation financial benefits and other advantages inherent in using the Port more effectively. Although excess capacity existed in the system during these periods of shutdown, it is difficult to see how this practice of closing the most efficient terminal facility in the country, in the short or the long-term, is in the interests of the prairie producers. In a region where various economic activities are interdependent or inter-connected, the closure of part of the system can lead to major regional development impacts and may place cost pressures on other economic activities.

Grain constitutes about 35% of the volume of exports from the Port of Prince Rupert.

9.2 Strengths and Opportunities

9.2.1 Available Capacity

Prince Rupert Grain is estimated to have capacity to handle over six million tonnes of grain per year. The terminal's capacity has never been tested. The maximum tonnage handled by the terminal was 5.3 million in the 1991/92 crop year. The efficient layout of the terminal and the rail system which serves it, provides opportunity to unload, clean and load out grain at a rate averaging 20 000 tonnes per day. Ample rail facilities are available immediately adjacent to Prince Rupert Grain for staging arriving trains and empty cars.

Rail capacity to Prince Rupert has never been used at more than 30%. It was anticipated that the Port would handle 25 mmt of coal per year when the line was upgraded. The coal market has been depressed and no more than five mmt has moved through the Port in any one year.

9.2.2 Location

Prince Rupert Harbour, the deepest natural harbour in North America, is safe, not congested and provides ample anchorage for vessels. The sailing time to Asia can be up to one and a half days shorter than from Vancouver.

9.2.3 Diversification

Prince Rupert Grain has expanded its product mix in the past two years to handle canola meal, peas, flax and alfalfa pellets. These products accounted for about 10% of the movement in the past year. The CWB is now shipping malt barley and durum through Prince Rupert.

In the past year, Prince Rupert Grain has been handling wood pellets, which are shipped to Sweden for use as a replacement to coal for heating fuel. This is the first non-grain product to be handled by Prince Rupert Grain. Approximately 70 000 tonnes will be handled this year. Prince Rupert Grain projects that this movement could reach 200 000 – 300 000 tonnes per year. This diversification is important, especially to supplement throughput in slow years. Prince Rupert Grain is providing storage and shipping (no processing or cleaning), and wood pellets are a completely natural product. The CGC have concerns about contamination of grain shipments and have established a zero tolerance for wood pellets in grain. This restriction requires extensive cleaning of equipment and monitoring of shipments which reduces the attractiveness of handling the product. Prince Rupert Grain is working with the CGC on the issue and hopes to find a reasonable compromise.

Prince Rupert Port Authority is currently installing a new ship-loader at Fairview Agport which will boost the maximum loading capacity of the facility and provide the ability to soft-handle commodities such as peas and lentils on a direct hit basis.

9.2.4 Two-Way Trade

Last year, plate steel was imported from Japan for shipment to Alberta where it was rolled into pipe for gas pipelines. It was not a large quantity, but it was the first product to be imported at Prince Rupert, and is seen as very important in raising Prince Rupert's profile with potential clients as an option for inbound shipments. Prince Rupert provides the shortest corridor from Asia to the North American heartland. It is important to take advantage of the underutilized Northern route. Infrastructure is in place for quick movement/transfer between modes. Other than containers, the Port can handle anything and everything that Vancouver and Pacific Northwest Ports handle. The Prince Rupert Port Authority claims that it would be possible to add 45 mmt of traffic without additional infrastructure. Prince Rupert Port Authority is interested in developing the Port as an option for container traffic as well. This would require significant investment in installation of loading and unloading facilities at Fairview Agport.

9.2.5 Just-In-Time Coordination

In 1995, a Just-In-Time coordination project was implemented with the cooperation of CN, the CWB and Prince Rupert Grain. Prince Rupert Grain feels the program was highly successful at managing staged and scheduled trains to meet vessel arrivals. Electronic data collection gave Prince Rupert Grain advance knowledge of what was on trains and allowed the terminal to be proactive and improve turn around times.

9.3 Issues, Challenges and Impediments

9.3.1 Debt Servicing

A number of parties that the Task Force met with expressed concerns that the high debt servicing cost of the long-term mortgage held by the Alberta government, discourages maximization of the facility when other options are available to shippers. The owners borrowed in excess of $220 million in 1983/84 to build the terminal. Prince Rupert Grain Ltd. could now borrow at lower interest rates, but any commercial lender is likely to require different terms and conditions than those in the current agreement with the Alberta government.

9.3.2 Ownership Structure

The ownership structure results in Prince Rupert Grain being managed as a residual facility. The five owners of Prince Rupert Grain(Agricore, Cargill, Richardson, Saskatchewan Wheat Pool and United Grain Growers) each own terminal facilities in Vancouver Harbour. It is understandable that they would want to maximize their returns by using their facilities in Vancouver, as opposed to pooling any handling margin at Prince Rupert. Some stakeholders expressed frustration that Prince Rupert Grain is operated as a residual port, given the many advantages of the modern terminal with good rail access. It is felt that this situation works against the interests of Canadian farmers, which would be better served by employing all West Coast export facilities efficiently and on an economic basis as noted by Justice Estey. Some parties that the Task Force met with expressed the view that a single, non-aligned ownership structure would be preferable.

9.3.3 Rail Freight Rates

The distance based freight rate to Prince Rupert (an extra 184 miles) is about $4.50 per tonne higher than to Vancouver. Prince Rupert Grain believes that CN would provide a parity rate if CN is certain that four to five million tonnes would move through Rupert consistently. In recent years CN has provided a rebate of a large portion of the $4.50 if minimum volumes are handled. This offer has been made to the CWB as the shipper of record, but apparently has not been extended to non-CWB shippers. Prince Rupert Grain is frustrated by the inability to promote non-CWB movement with a parity rate. Prince Rupert Grain would like to have "proper commercial relations in place". They would like to approach CN with a guarantee that a 102-car train will be turned around in 8 or 16 hours and negotiate a discount on the basis of service.

9.3.4 Taxation and Marine Charges

Current property taxes (for 1999) for Prince Rupert Grain are nearly $3 million. Table 15 illustrates the taxation rate per tonne shipped since the opening of the grain terminal. In the early years of operation, generally, as volumes handled increased, the taxation per tonne declined. Recent lower shipment levels have reversed this trend to the point where municipal taxation per tonne shipped in 1998 was over $1.00 per tonne. The very low volume handled during the current year will result in an even higher per tonne assessment (estimated to be between $1.50 and $2.00), whereas if throughput had remained at four million tonnes, it would be a $0.75 per tonne cost. This year it will be the second biggest operating cost after labour. Prince Rupert Grain's mill rate is relatively low, or at least comparable to that at Vancouver terminals, but it is a newer facility resulting in a higher assessment.

TABLE 15
Prince Rupert Grain Shipment vs. Municipal Taxation

Year	Shipments (tonnes)	Total Municipal Taxation (dollars)	Municipal Taxes per Tonne Shipped (dollars)
1985	865 093	2,901,529.00	3.35
1986	1 891 620	1,795,659.00	0.95
1987	4 842 239	3,696,828.00	0.76
1988	3 678 885	4,175,514.00	1.13
1989	3 340 772	4,554,415.00	1.36
1990	4 377 985	3,766,685.00	0.86
1991	5 133 832	3,727,362.00	0.73
1992	5 311 369	3,945,776.00	0.74
1993	4 462 030	3,443,273.00	0.77
1994	5 547 916	2,953,564.00	0.53
1995	4 327 529	2,839,448.00	0.66
1996	3 461 998	2,778,305.00	0.80
1997	4 952 234	2,885,765.00	0.58
1998	2 899 947	2,955,642.00	1.02
1999	n/a	2,917,543.00	n/a

Source: Prince Rupert Port Authority; BC Assessment

Cost recovery and logistical factors have resulted in the Pilotage costs borne by shippers at Prince Rupert being relatively high compared to Vancouver. It is necessary to transport pilots to Triple Island to board vessels bound for Prince Rupert Harbour, while Vancouver pilots are based on Vancouver Island, which is much closer for boarding.

9.3.5 Lease Rate

The lease cost paid to Prince Rupert Port Authority is throughput based, at $0.40 per tonne. Prince Rupert Grain would like to see the lease rate based on the commercial value of the land, regardless of throughput.

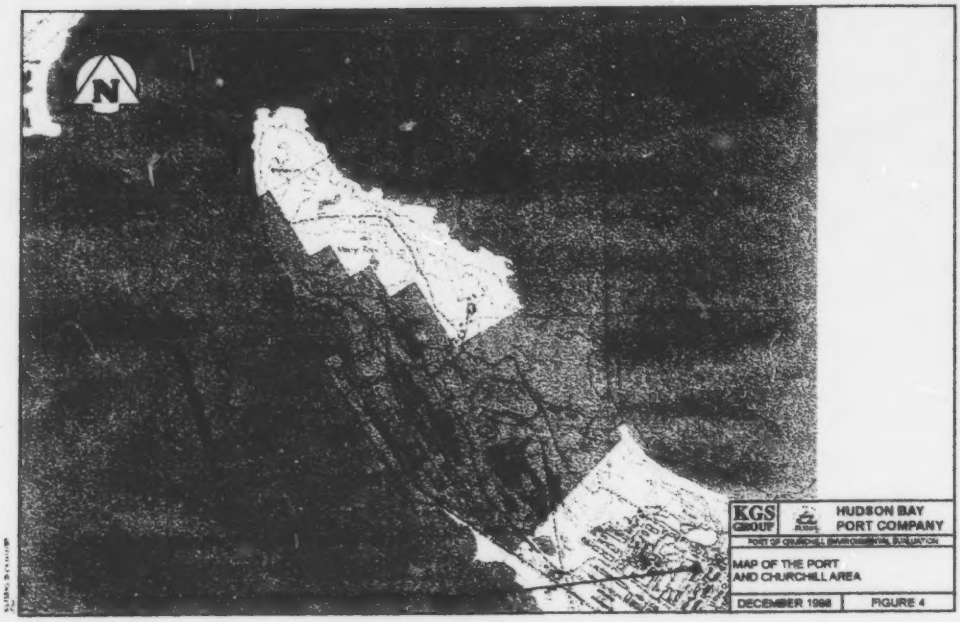
9.3.6 Rail Line Abandonment

Concern was expressed that the abandonment of rail lines in northern Alberta could threaten the flow of grain to Prince Rupert. The health and integrity of the East – West transportation system is vitally important to the Port. As a residual port, Prince Rupert is vulnerable to the competitive factors from the North – South pull.

10. Churchill

10.1 Background

After a number of years of basic maintenance only by the previous owner, Hudson Bay Port Company (HBPC) has now undertaken significant upgrading at the grain terminal, supported by federal and provincial contributions. In the 1998 shipping season, the rail line and terminal began handling fully loaded steel hopper cars of grain on a regularly scheduled basis. At present, the Canadian Wheat Board (CWB) is the sole exporter of grain from Churchill. The current estimate of the CWB program for the 1999 shipping season is 350 000 tonnes. Most of the grain from the Churchill catchment area is sourced on CN branchlines. (OmniTRAX also owns the Carlton Trail Railway in the Churchill catchment area.) HBR and CN have an interchange agreement ensuring car supply to meet Churchill programs. This year, at the CWB's encouragement, CN and CP have established an agreement on interchange of cars destined for Churchill. This is the first such agreement. Previously, the high quality wheat and durum concentrated on the southern CP lines, was not available for shipment to Churchill.



Map courtesy of Hudson Bay Port Company & KGS Group

Grain is by far the most important commodity shipped through Churchill, providing approximately 90% of the volume of the Port's throughput.

10.2 Strengths and Opportunities

10.2.1 Diversification

Opportunities for the Port of Churchill are seen in direct relation to opportunities for the Town. OmniTRAX is hoping to expand the grains and grain products shipped through the Port to include specialty crops and to find an offshore market for grain screening pellets (currently screenings are railed back to the prairie). OmniTRAX has retained a VP Marketing to pursue these and other opportunities.

Diversification and development of two-way trade through Churchill are important objectives. In the 1998 shipping season, 11 000 tonnes of copper concentrate arrived from Spain for rail shipment to Hudson Bay Mining and Smelting at Flin Flon. OmniTRAX is pursuing further concentrate and ore shipments for both HBMS and INCO. Other bulk commodities, which could be imported, are sulfur, phosphate rock, lumber and paper products. Markets for the export of specialty crops are being pursued.

10.2.2 Extended Season

HBPC is optimistic about the capabilities of the Port. They claim that it is feasible to ship two million tonnes through Churchill in one extended season. The terminal can unload a 100-car unit train on one shift. A second shift is possible if the demand exists. The long daylight hours are conducive to scheduling a second shift. Improvements in ice forecasting technology such as infrared ice imaging carried out by satellite, and available via Internet on board vessels, greatly enhances northern navigation.

10.2.3 Northern Re-Supply

Currently $200 million worth of goods and services flow annually from Western provinces through Churchill en route to northern communities, most of which arrives by rail and is forwarded by barge. Churchill is a primary supply route for seven communities in Nunavut. The Hudson Bay Railway (HBR) is needed to maintain and build this "re-supply" business. Potential new gold mines in Nunavut (Baker Lake and Rankin Inlet) could substantially increase the re-supply business. HBR is seen as critical, and Churchill interests claim that a consistent grain supply is needed to ensure its survival for the re-supply business. In addition to the northern re-supply business, the HBR serves 60,000 people in communities along its route.

The re-supply traffic is either bulk fuel or deck cargo. Deck cargo consists of building materials, dangerous goods, furniture and household goods, general freight, groceries, heavy equipment, vehicles and highway trailers. Much of this cargo is shipped either by boxcar or flat railcars with van trailers onboard. The cargo that arrives by boxcar is transferred to vans at Churchill and loaded onto barge for delivery to destination. According to the "Northern Territories Transportation Study" prepared by Prolog Canada Inc., opportunity to integrate this operation with intermodal containers is now a possibility. Containers have not been used for this traffic previously, in part due to the historic reluctance of CN to placing containers on the Hudson Bay rail line.

10.2.4 Tourism

Tourism is an important growth industry for the community. Last year 18,000 tourists visited Churchill (9,000 arrived by rail). There is new investment in the tourist industry, including hotels, restaurants and tour operators. Four cruise ships visited Churchill this summer (last year saw the first arrival of two cruise ships). Churchill is promoting four distinct tourist seasons (bird watching, whale watching, bear watching and northern lights) to increase traffic. The town is the gateway to the new Wapusk National Park on the shores of Hudson Bay. A new terminal building began operation in September at the Churchill Airport. OmniTRAX is interested in the potential franchising of passenger service on the Bay line. The Town indicates that they are not happy with the current service.

10.2.5 Rocket Range

Reactivation of the Akjuit Rocket Range is promoted by all Churchill interests. The Town feels it will be necessary to determine if a smaller scale project would be more viable. The rail line is seen as vital to promotion of the Rocket Range.

10.2.6 Northern Employment

The employment provided by the infrastructure improvements at HBPC is very important for the community. An aboriginal dredging company has been established and will begin work dredging the harbour next summer. Preparatory work for the dredging is now under way. Keewatin Community College (at The Pas) has been very supportive with programs to develop an aboriginal labour force for the Port.

10.2.7 Trade Corridor

Churchill is the northern point on the North American Trade Corridor stretching through the American heartland to Mexico. Maintaining and enhancing the rail line and Port infrastructure is seen as vital to development of the Corridor.

10.3 Issues, Challenges and Impediments

10.3.1 Consistent Supply of Grain

Maintaining a consistent supply of grain is seen as the most important factor in ensuring the future of the Port of Churchill. OmniTRAX indicates that one million metric tonnes are required annually to ensure continued survival of, and reinvestment in, the grain port. Churchill interests stress that this is their "fair share" of grain volume. OmniTRAX further argues that the savings to Atlantic Rim destinations are estimated to be $20-23 per tonne due to the lowest freight rate for producers, the lowest elevation tariffs and advantageous shipping rates.

The perceived bias by the grain companies against Churchill was raised as a concern by parties meeting with the Task Force. Although grain companies claim that market forces compel them to ship elsewhere, advocates of the Port feel that Churchill has a substantial structural disadvantage due to the grain companies' ownership of facilities at other ports.

10.3.2 Port Image

The major impediment to Churchill has been the uncertainty hanging over the future of the Port and rail line. Hudson Bay Port Company believes that the shipping season can be lengthened to five or six months. With assurances that the system will be there, investment will continue. They see volume (1 mmt) as being paramount. With federal and provincial support, HBPC has done a great deal of upgrading work on the facilities in the past two years.

10.3.3 Insurance

OmniTRAX, assisted by the federal and provincial governments, has been encouraging the international insurance industry to ease the insurance restrictions and surcharges placed on shipments in and out of Churchill. There is currently a 15% surcharge by the insurance industry for the August 15 to October 15 shipping season. Additional fees are assessed on a case by case basis on both ends of the season. OmniTRAX hopes to have a ruling by the insurance industry by the end of the season. Improvements in ice forecasting technology are expected to aid in making a case for improved insurance coverage terms.

10.3.4 Rail Line Abandonment

Churchill interests feel that the branch line abandonment process threatens the Churchill catchment area. If mainline carriers are allowed to dictate the branch line configuration, they fear the Prince Albert, Birch Hills and Tisdale West subdivisions will all be abandoned. Proposed amendments to the provisions of the *Canada Transportation Act* dealing with branch line abandonment contained in the Stakeholder Report of the Kroeger Process may help to address these concerns.

SUMMARY OF KEY FINDINGS

The Ports Task Force met with all major stakeholders having an interest in the longer-term competitiveness of the four grain ports and the Seaway, and sought their written views on the key strengths of each port and region as well as the challenges facing them. The following are the key findings.

11. Findings Affecting More Than One Port

It is important for grain shippers to retain market choices and have options during periods of growth. Periodic congestion in Vancouver illustrates the high cost to the nation of service delays and the need to protect strategic options. Canada needs all four of the western grain ports and the Seaway to play a unique role in the system, and a more commercial system should enable each to more adequately fulfill its potential.

In general, there is sufficient handling capacity at each of the key western grain ports. As exports are not expected to increase dramatically from their current levels, there is no evident port-side investments needed for capacity alone. Rather, the challenge is to incorporate sufficient commercial signals into the grain logistics and handling system to drive efficiency gains. This has been evident in other transportation networks such as the containerized trades. Better use of the infrastructure allows producers to pay lower costs for transportation.

The government appointed Mr. Arthur Kroeger to lead a consultative process to develop the necessary operational details of a more efficient, accountable and beneficial grain handling and transportation system and to develop a report by September 30, 1999, setting out the necessary operational details and possible legislative changes needed to determine how a new, more commercial system would work. This reform will be based on the framework outlined by Justice Willard Estey's report for a more commercially oriented system.

A Steering Committee of the principal industry stakeholders was established to develop the implementation plan. The process has drawn on industry experts, including farm representatives, supplemented by input from federal and provincial government officials. The goal is to have all changes, including any legislative changes, in place by the beginning of the 2000/2001 crop year.

The Kroeger process and the Ports Task Force have worked in parallel, and the work of each has informed the other.

11.1 Structural Change

Perhaps the most striking finding of our review has been the extent to which structural changes have and continue to reshape the grain industry in fundamental ways. A shift in markets from east to west has proven detrimental to the prospects of Thunder Bay and the St. Lawrence Seaway. Increasing shipments south to U.S. markets, and more grain as feed for livestock production or inputs to value-added processing facilities on

the Prairies also are important environment shifts. The key issue today remains one of adaptation to continued long-term structural change, particularly for Thunder Bay, and to a lesser extent, Churchill and Prince Rupert.

The Agriculture Canada projections contained in this report show a trend to lower grain exports, and there are fewer crop years where it is likely that exports will rise above 30 million metric tonnes. This means that terminal capacity in certain ports will likely continue to be underutilized, even without productivity improvements. The Canadian Wheat Board's strong marketing role should ensure it can continue to facilitate a basic level of shipments through less diversified and financially mature ports such as Churchill and Prince Rupert.

11.2 Competition

The Ports Task Force has consistently heard requests for the use of more market forces to find solutions and less government intervention. Port stakeholders have also insisted on a level playing field and regional equity in the implementation of changes.

Consistent with this widely-held objective, the Ports Task Force will not propose any interventions which would slow down the move towards a more commercial system.

11.2.1 Rail to Lower St. Lawrence

Thunder Bay Seaway interests have alleged that government owned grain hopper cars are being provided at what they claim are less than market rates, for use outside the west, and that rail rates offered to Quebec ports are relatively low compared to the regulated rates offered to Thunder Bay. From the prairie midpoint to Thunder Bay the rate is $34.45 per tonne. From Thunder Bay to Quebec, a greater distance, the railways are apparently charging $18 per tonne. (Note that the Thunder Bay catchment area is primarily further east than the prairie midpoint, with corresponding lower freight rates per tonne, e.g. Weyburn, a distance of 764 miles, has a rate of $27.31 per tonne.)

While shippers want freedom of choice, including choice of carriers, Seaway interests feel that it is important to implement a distribution system based on fair market rules. In response, the railways point to significant efficiency gains which they have made, the relatively higher cost of the origination portion on branchlines, as well as the logistical efficiencies directly associated with unit train shipments railed from the prairies directly to the lower St. Lawrence.

The issue of alleged unfair rail pricing from Thunder Bay to eastern destinations, when compared to rates to Thunder Bay, was an issue dealt with judicially by the National Transportation Agency as a public interest complaint under the *National Transportation Act*, 1987. At that time the Agency found the majority of rates to be appropriate, but found a few rates that CN was charging to be less than cost, and ordered CN to put in place competitive rates. CN complied. Under the *Canada Transportation Act*, there is no prohibition against rail rates which are below cost.

Justice Estey recommended in his report that the Government of Canada sell its hopper car fleet at fair market value, which would address the concerns raised by these stakeholders. Options are presently being examined to determine the optimum approach for the government to adopt in addressing this recommendation.

It is very difficult to determine if specific pricing practices by railways represent unfair competition or just aggressive market development behavior and competition between modes. It is also outside the scope and mandate of this review to render a judgment on this situation. Market forces should determine the ultimate choice of modes. While possibly an example of modal competition, this issue may require monitoring and, if necessary, could be raised in the context of the review of the *Canada Transportation Act.*

11.2.2 Underusage of Prince Rupert Grain

In the case of Prince Rupert Grain, it has been argued that the joint ownership structure, combined with the ownership by the same parties of facilities in Vancouver, has led to underuse of Prince Rupert Grain. In his report, Justice Estey remarked:

> *It is readily apparent that an extensive and serious program must be launched some day to find the solution to the problems surrounding the operation of the Port of Prince Rupert. The Port of Vancouver has serious burdens from sheer volume which impinge upon its capacity at peak periods. An alternative facility on our West Coast, even for crisis and backup purposes alone, requires some broad and comprehensive studies and negotiations between all of the parties concerned. It would appear to be a matter of strategic security to be aware that a significant portion of the Western Canadian grain harvest may find its way to Pacific facilities in the United States if Canada should fail to employ all its export facilities efficiently and on an economic basis.*

It is clear from presentations made to us that the Prince Rupert Grain terminal serves as a residual West Coast facility. When capacity is reached in Vancouver, more grain is shipped through Prince Rupert. When smaller amounts of grain are exported through the West Coast, the volume shipped through Prince Rupert drops.

Prince Rupert Grain was built at a time when exports through the West Coast were expected to be more than double what they were in the 1998/99 crop year. At today's export levels it may not be possible to keep both Prince Rupert Grain and all the Vancouver terminals operating at or near capacity in all crop years - there may be insufficient export grain. It is logical then that some capacity must remain idle. It is ironic that the idle facility is the most modern and efficient, but a number of factors give rise to that.

The ownership and debt structure of the Prince Rupert Grain facility play a role in limiting the volume of grain which is shipped through Prince Rupert. There is a perception that because all five owners of Prince Rupert Grain also own facilities in Vancouver, they are not eager to ship non-CWB grains to Prince Rupert because they may earn higher returns individually by using their own facilities in Vancouver than they would if they shared the elevation/cleaning/storage fees with the other parties in Prince

Rupert Grain. Ownership of competing terminals in Vancouver Harbour appear to encourage the closure of Prince Rupert Grain when there is excess capacity at Vancouver facilities.

The province of Alberta holds the outstanding debt of Prince Rupert Grain. Today, more debt is owed to the province than was originally lent. As with many public investments in the past, this project has not been a commercial success for the government. Alberta invested in order to provide its farmers with a second strategic option on the West Coast, which has, to a certain extent, been achieved. However, when the Prince Rupert Grain facility is closed, not even Alberta farmers, the indirect investors in the facility, have the option of using it. Although the Government of Alberta has said it would like to get out of this debt arrangement, it states that it cannot take unilateral action prior to 2015 when the first mortgage bonds are due. This debt arrangement, with the public sector holding mortgage bonds at 11%, also limits the structural incentives for the owners to find a solution to the underutilization of the facility.

Prince Rupert Grain is a modern, highly efficient terminal capable of handling unit trains. The resulting turnaround times compare very favorably with those at Vancouver. The benefits mean lower costs to the railways which should be reflected in higher prices to producers. However, it has been reported to the Task Force that this advantage is not being consistently reflected in pricing discounts for use of the terminal.

The grade advantages on the Prince Rupert rail line are such that the extra $4.50 per tonne which CN charges, based on the regulated distance based rates, is probably not reflective of the reduced running costs associated with low grades in terms of fuel and wear and tear on equipment. The surcharge also does not take into account the efficiencies of handling grain hopper cars at the terminal, which includes sufficient storage immediately adjacent to Prince Rupert Grain for both full and empty cars, and high throughput unload of unit trains with minimal switching of cars.

These disadvantages faced by Prince Rupert Grain are complicated by complex business relationships. Our discussions found that while individual stakeholders may be prepared to compromise, no action will be forthcoming unless it is clear that other stakeholders are also 'sharing the pain' and will compromise on solutions which would see greater use of this excellent facility. Full or partial closure of a port like Prince Rupert presents an economic development challenge to the entire region, with a transfer of social costs, including taxation, to other users of the infrastructure and services.

In a more commercial system which moves away from a strictly mileage based rate, flexibility to reduce the rate and to negotiate deals which take into account the many advantages which Prince Rupert has to offer, may result in lower rates for grain movements to Prince Rupert.

11.3 Competitiveness with US Ports

Genuine concerns have been raised across the country regarding a level-playing field with US ports. This is of particular concern in terms of west coast exports and competition from the Mississippi waterway for what was traditionally the Seaway grain

trade. Many examples have been provided which indicate that US public policy is very supportive of transportation infrastructure through taxation, funding, subsidization or other favorable treatment.

Currently the low exchange rate on the Canadian dollar serves to largely offset the variances between our public policy environment and the approach to funding infrastructure followed by our neighbor and trade partner. The US system views transportation infrastructure as essential to trade competitiveness, and invokes the national interest as justification for direct and indirect aid in the funding and financing of transport infrastructure. Recent transportation sector reforms in Canada have sought to allow greater commercial freedom and introduce market discipline in infrastructure financing decisions. At present the lower Canadian dollar has helped to balance the competitive equation with the United States. Canada cannot compete on the basis of matching subsidies. In the longer term, the best approach is to implement efficiency measures that will make Canadian ports more attractive.

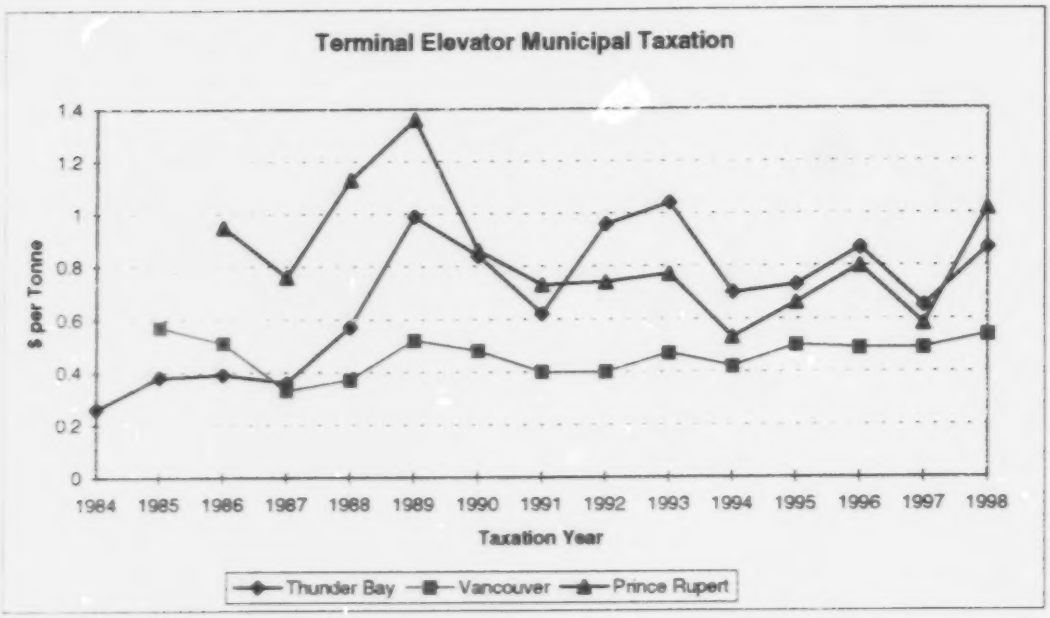
In the context of this review of grain handling in our ports, Transport Canada has commissioned a study of the competitiveness of US and Canadian grain ports, which will provide useful information for policy makers across the country in ascertaining whether or not the approach followed in Canada could place our ports at a competitive disadvantage. The report should be completed within the coming months, and the findings released.

The US *Transportation Equity Act for the 21st Century* (TEA-21), which replaces ISTEA, contains specific provisions for funding of trade corridor planning and border infrastructure enhancement. This is likely to foster the continued growth of trade corridor organizations.

11.4 Taxation

In the ports of Vancouver, Prince Rupert and Thunder Bay, heavy municipal taxation has been raised repeatedly as a major burden on the grain industry. The effect on ports such as Thunder Bay and Prince Rupert, where volumes have fluctuated dramatically, has been pronounced. As volumes have dropped off in Thunder Bay from their peak in the early 1980s, taxes per tonne have risen dramatically. The 1998 taxation level per tonne ($0.87) was almost 235% of the taxation level per tonne in 1984. Prince Rupert has seen a similar impact, with 1998 taxes per tonne over $1.00.

The following graph illustrates the comparative property taxation per tonne, paid by the grain terminals over a fifteen year period. The higher tonnage rates paid by Thunder Bay and Prince Rupert terminals indicate, to a great extent, the effect of reduced volumes. With lower volumes passing through these ports, the rate per tonne is increased, making them less competitive than Vancouver or US options.



The Greater Vancouver Gateway Council is particularly worried about the relative disadvantage the Port of Vancouver faces versus US ports in the northwest. In the US, the ports are able to levy taxes (according to the March 1999 WESTAC Briefing, Seattle/Tacoma/ Portland collect a combined US$50 million each year), whereas in Canada, the port authorities have no such authority, and their tenants must pay significant taxes. The Gateway Council argues that competing US West Coast gateways enjoy a fifteen percent long-term cost advantage which is temporarily masked by a weak Canadian dollar. This cost advantage is a result, according to the Gateway, of transportation taxes in Canada, and massive public investments, subsidies and tax exemptions for transportation infrastructure investments in the US. The Gateway Council is seeking a fair competitive framework which would bring capital investment charges and taxation into line with their US competitors.

We note the willingness of various jurisdictions to reconsider the taxation burden on these ports and their facilities. We encourage all parties to carefully review these issues to determine whether the current rates of taxation are sustainable.

11.5 Impact on Other Trades

In many port regions, grain movements represent the backbone of the trade activities. Lower volumes or port closure have substantive impact on other trades such as coal and iron ore, resulting in a global weakening of the transportation options in the region.

11.6 Labour

It is important for employees of port terminals and carrier employees to enter into a true partnership to make the Canadian system not only more efficient and competitive, but more stable and reliable in order to better serve the buyers of our export grain as well

as Western Canadian producers. Although recent amendments to the *Canada Labour Code* prevent the long-shore and tugboat industries from refusing to service grain ships, all stakeholders in the grain transportation industry will need to consider themselves partners in developing sustainable commercial relationships which do not hurt the reputation of our West Coast ports, nor unfairly penalize the grain producers.

11.7 Corridors and Gateways

Corridors can be defined broadly as:

- the flows of goods and people domestically and internationally;
- the ground transportation infrastructure and systems [highway, rail and port] that facilitate these flows; and
- the policy, legislation and regulations governing these elements.

Corridor initiatives promote trade and regional development, and facilitate transport flows; the focus is primarily on the highway mode and infrastructure, although some initiatives promote intermodal strategies and environmental objectives. In some instances corridor objectives go beyond transportation considerations [e.g. establishment of free trade zones].

Some corridor initiatives are on a North American scale, although most function on a regional basis. The predominant focus is on facilitation of north-south trade and transport flows, although there is recognition of east-west connectivity issues. Emphasis on the facilitation of north-south flows has led to conflicting views and competing interests in some regions regarding the potential impact on the competitiveness of Canadian facilities and entities.

Although the focus of corridor advocates is largely on north-south trade, the federal government is also mindful of the importance of east-west transportation corridors, both on the National Highway System, and as reflected in initiatives such as the *Western Canadian Corridors and Ports Initiative*.

A number of corridor groups stressed the potential for corridor initiatives to provide a catalyst for economic development; this suggests the need to ensure an adequate interface with economic development departments, something which is already occurring in a number of instances.

The Greater Vancouver Gateway Council promotes the international competitiveness of the area's intermodal transportation facilities. A similar endeavour is active in the Montreal area [e.g. *Forum sur le transport des marchandises*] promoting efficient transportation systems as a tool for economic development. Likewise, the Northwest Corridor Development Corporation is working to promote the northern route which is anchored by the Port of Prince Rupert. Efforts are under way, under the aegis of the new Seaway Corporation and the Canadian Shipowners Association, to promote an umbrella Seaway group which could work to encourage utilization of the Seaway corridor.

On a regional level, the Western Canadian Corridors and Ports Initiative highlights the evolving awareness among jurisdictions and stakeholders of the strategic importance of multi-modal corridors and their linkages to ports. Underlying issues being considered within this initiative include factors affecting competitiveness, infrastructure funding mechanisms, and intelligent transportation applications. Similarly, the Northern Great Plains Initiative, in which Manitoba participates, targets opportunities for regional and international trade development through an assessment of specific transportation infrastructure and technology needs.

The federal government recognizes the importance of trade and transportation corridors in facilitating interprovincial and international trade. A national corridor strategy must be consistent with the federal government's overall transportation responsibilities that promote safety, sustainability, international competitiveness and trade facilitation.

Our national grain ports should continue to develop mechanisms for partnerships in improving port efficiency and productivity and in marketing the advantages of specific port regimes. The Task Force notes the positive influence of stakeholders' groups in advancing the development and growth of our port regions. Gateway councils and port promotion initiatives could assist in ensuring adequate follow-up on many key challenges identified during the summer review.

11.8 Marine Service Fees

The issue of pilotage fees and other marine service fees was raised on a number of occasions. The Ports Task Force notes that the Canadian Transportation Agency has just concluded a review of the marine pilotage system which includes recommendations to ensure Canada has an efficient, viable and safe pilotage system to meet the ongoing and long-term expectations and demands of all users.

The Agency has submitted a final report of its findings and recommendations to the Minister of Transport and he will be reviewing and responding to these in a report to Parliament which should be tabled in early November, 1999.

The Treasury Board Secretariat also announced that it will undertake a comprehensive review of marine service fees, including Coast Guard fees for vessels transporting bulk commodities. Transport Canada is monitoring this review and will carefully assess the recommendations which flow from it. In the meantime, the implementation of the port reform and the reforms undertaken by Transport Canada under the *Canada Marine Act* to reduce the bureaucratic burden on ports should facilitate the development and delivery of efficient marine services in Canada.

11.9 Accountability

Throughout our consultations across the country, we heard repeatedly that by ensuring accountability and responsibility in the grain transportation and handling system, many of the existing problems could be resolved. To the extent that a more commercial system includes increased levels of accountability, with appropriate financial rewards and penalties attached to service performance, market signals will drive the system to be more efficient.

11.10 Information Exchange

The grain handling and logistics system is extraordinarily complex. With its myriad of producers in the country, multiple country elevators, tens of thousands of hopper cars, numerous agents, both private and public, multiple export points and sales contracts, it is a system which requires information sharing and exchange. Although the stakeholders do not all wish to share information without a corresponding return, we believe that the development of an improved, standardized information exchange should be encouraged. The increased use and application of current information technology among participants in the grain handling and transportation system could facilitate better coordination of grain from country position to port and onto export ships. To the extent that this could dramatically reduce inefficiencies and thus costs, this would be in the national interest.

With respect to emerging technologies, new information systems have been the central agent of change in the Canadian railways' re-engineering of their core business processes, enabling delivery of reliable customer service at lower cost. It is largely through these systems that the railways have been able to increasingly guarantee adequate car supply and improved on-time performance. The Ports Task Force is convinced that similar results could be achieved in the grain handling and transportation field.

Planning and deployment of Intelligent Transportation Systems (ITS) is increasingly recognized as the most effective way of improving the productivity, safety, reliability and sustainability of the transportation system. Support for technological development, expansion and standardization may provide a role for public sector support. There is a need for the public sector to work collaboratively with private sector players on ITS standardization, R & D and the elaboration of consistent deployment strategies. In addition, there is a need to expand and share data collection capacities, as well as to train users to ensure accuracy of data.

12. Vancouver

12.1 Congestion

Justice Estey remarked:

> *The Port of Vancouver has serious burdens from sheer volume which impinge upon its capacity at peak periods.*

It is this lower mainland congestion, together with in-country rail difficulties, which originally instigated the review undertaken by Justice Estey. The more commercial system recommended by him, and being considered by Mr. Kroeger, should improve efficiency and use of rail cars. Recent capacity upgrades throughout the logistics network will also go a long way towards addressing these concerns.

As the Canadian grain handling system evolves towards a more highly automated and efficient system based on high throughput elevators in the country, unit trains of single grade grain bound for direct hit unloading, grain storage capacity in the ports will become less important as compared with loading/unloading capacity. These changes are already well advanced and millions of dollars of investment have committed all the major partners to these efficiency reforms.

Reforms which improve the market signals and the capacity of stakeholders to utilize information technology to share logistics information, will respond to this need and result in reduced congestion. These reforms are largely under way, and the regulatory system must now catch up to the reforms.

12.2 Railway Service

The Ports Task Force encourages the stakeholders at Vancouver Port to give the existing relationships a chance to work effectively in a more commercial system. If this is found to be unsuccessful, the partners may wish to consider the possibility of a terminal railway to take over joint rail operations at Vancouver and service terminals. This type of development would not be inconsistent with current directions in Canadian railway operations, and may well improve the level of in-port service.

12.3 Labour

The repeated labour unrest at the Port of Vancouver has continually cast a shadow both on the port and on Canada as a reliable grain exporter. Unfortunately it is often the producers who end up paying the cost of these delays through rising demurrage bills and lower sales volumes or prices. The Task Force notes the need for genuine partnerships and flexibility in adjusting to new markets and a new grain transportation and handling system.

Recent amendments to the *Canada Labour Code* prevent the long-shore and tugboat industries from refusing to service grain ships. However, all stakeholders on the West Coast will need to consider themselves partners in developing sustainable commercial relationships which do not hurt the reputation of our West Coast ports, nor unfairly penalize the grain producers.

12.4 Taxation

Taxation is a growing concern in the Vancouver area. The Ports Task Force commends the Gateway Council for the comparative work that it is doing in this area, and notes positive indications that the municipal level of government has indicated it is willing to review this issue more closely.

12.5 Greater Vancouver Gateway Council

The Greater Vancouver Gateway Council is comprised of senior executives from industry and government who subscribe to a common vision that Greater Vancouver become the Gateway of Choice for North America. The Council brings together interests from air, trucking, rail, maritime and government.

The Task Force was impressed with the work of the Gateway Council, and in particular, its potential as a model for similar multi-sectoral councils which could be encouraged and supported for the other port regions. The bringing together of business and government interests to debate, discuss and ultimately promote the economic growth of a region or gateway, is a model which could usefully be applied to other port regions.

13. Thunder Bay/Seaway

13.1 Low Volumes

Thunder Bay continues to handle a large proportion of the grain exported from western Canada. However, the declining volume of grain, flowing from the prairie to Thunder Bay for furtherance to eastern transfer elevators or export markets, is the greatest threat to the Port. As a result, significant consolidation in terminal capacity and in the bulker fleet has occurred in the last fifteen years.

As noted elsewhere, fundamental market shifts have occurred to the detriment of Thunder Bay. The only way to alter this would be to either adjust to the new, lower volumes, or develop or expand into new markets. Seaway interests will probably need to undertake both strategies. To be fair, a significant degree of consolidation has already occurred, both in the lake fleet and in the terminal capacity at Thunder Bay. If volumes settle at current levels, this consolidation will likely continue.

In support of Seaway routings, recommendations contained in the Stakeholders' Report of the Kroeger Process regarding increased flexibility to negotiate more attractive port-specific transactions, possibly under a revenue cap, would enable Seaway transportation partners to offer competitive prices. If the Canadian Wheat Board and non-Board marketers, working with customers, are able to continue to determine port of exit, then flexibility should enable Seaway transportation partners to price themselves into the transportation chain. The key will be in the ultimate sales market for the grain, and the volume of those sales.

13.2 Rail Freight Rates

It has been argued that the increasing use of rail to the lower St. Lawrence or to US destinations is founded on low rail rates east of Thunder Bay, made possible by the level of revenue on regulated routes to the west of Thunder Bay and the use of publicly provided hopper cars at less than market rates. In response, the railways point to

significant efficiency gains which they have made, the relatively higher cost of the origination portion on branchlines, as well as the logistical efficiencies directly associated with unit train shipments railed from the prairies directly to the lower St. Lawrence.

The concern that rail rates offered to Quebec ports are relatively low compared to the regulated rates to Thunder Bay requires monitoring and, if necessary, could be referred to the review of the *Canada Transportation Act*.

13.3 Railway Service

The Ports Task Force encourages the stakeholders at Thunder Bay Port to give the existing relationships a chance to work effectively in a more commercial system. If this is found to be unsuccessful, the partners may wish to consider the possibility of a terminal railway to take over joint rail operations at Thunder Bay and service terminals. This type of development would not be inconsistent with current directions in Canadian railway operations, and may well improve the level of in-port service.

13.4 Reduction in Laker Fleet

The Ports Task Force was impressed by the role that the Great Lakes Bulkers have and continue to play in the economy of the Seaway. The consolidation that has occurred in this fleet over the past fifteen years is considerable, and the relatively stable rates charged by this fleet are notable, especially when compared with ocean ships. We believe that there remains an important role for this fleet in the North American economy, although the fleet may consolidate further.

The competitive threat to the waterway routing from rail to the lower St. Lawrence is real. Although the rates offered by the railways today are very attractive, grain shippers must consider that their long term interest lies in ensuring that there are choices for shipping grain, even if temporarily it is cheaper to ship by rail or to use salties. It would not be in the best interests of any shippers to lose the bulker fleet completely. A product which finds itself captive to one mode often finds the reduced choice results in higher costs in the long run.

13.5 Taxation

Taxation is a major concern in Thunder Bay. However, if the volumes of grain handled remain at current levels, the level of taxation may not be sustainable, considering the stiff competition the grain elevators are facing from the rail option to the lower St. Lawrence. All parties will need to view themselves as partners in the Thunder Bay/Seaway route, and governments at all levels should be facilitators in establishing competitive gateways rather than viewing transportation infrastructure as another source of revenue.

13.6 Seaway Corridor/Gateway Council

The Seaway cuts across several provinces, jurisdictions and regulatory regimes. There are also numerous organizations which individually work to promote the utilization of the Waterway. In Quebec, SODES has done significant work bringing together maritime interests. The Canadian Shipowners Association and Chamber of Maritime Commerce have worked to promote the Seaway, developing the 'Vision' document of several years ago, which we understand is now being updated. The Task Force commends these efforts, and encourages all parties to work together, perhaps under the umbrella of the Seaway Corporation, to coordinate their efforts to develop and promote the Seaway corridor.

14. Prince Rupert

14.1 Regional Development

In any consideration of the transportation challenges facing Prince Rupert, the role of that infrastructure in regional economic development must be taken into account. The *Canada Transportation Act* recognized that transportation is a key to regional development and the commercial viability of transportation links are balanced with regional economic development objectives so that the potential economic strength of each region may be realized. The Ports Task Force is cognizant of this, and of the importance to the entire northern region of British Columbia (and northern Alberta) of this rail link and trade corridor.

Various levels of government have made substantial investments in this region, in terms of infrastructure such as rail, and terminal capacity to support the grain, mining and forestry sectors. Alberta's commitment to Prince Rupert Grain was one such investment. In the interests of the entire region, the town and the communities which depend on the rail link, the Ports Task Force urges the stakeholders in Prince Rupert Grain to work together for the development of the region and the country, rather than simply for the protection of specific commercial interests.

14.2 Ownership Structure and Debt Servicing

The joint ownership of the Prince Rupert Grain facility, combined with ownership of grain terminals in Vancouver by the same companies, reduces incentives to fuller utilization of this highly efficient, modern facility. It is important for the grain companies, the debt holder, and other interested stakeholders to discuss appropriate incentives leading to more consistent use of the facility. The principal owners of Prince Rupert Grain Ltd. and the Government of Alberta may have an interest in developing potential mechanisms within the current agreement to ensure that the appropriate incentives for the users to promote fuller utilization of this strategic facility are in place.

Any financial transaction with this many partners increases the complexity. Tax implications, individual partners' corporate financial positions, as well as the economic interests of the Government of Alberta must all be considered carefully. In spite of these complexities, however, the lack of solutions appears to be contrary to the interests of prairie farmers, northern BC, Prince Rupert and Canada.

14.3 Rail Freight Rates

In the past, CN has offered incentive rates lower than the $4.50 surcharge to Prince Rupert, subject to minimum volumes of grain. In a more commercial system which provides some flexibility to move away from a strictly mileage based rate, there will be more scope to reduce the rate and to negotiate deals which take account of the many efficiencies which Prince Rupert Grain has to offer. It is anticipated that proposals put forward in the Stakeholders' Report of the Kroeger Process may make it attractive to offer incentive rates to non-Canadian Wheat Board grains to move through Prince Rupert.

14.4 Taxation

Taxation is a major concern in Prince Rupert. The Ports Task Force commends the city for the cooperation it has shown in reassessments. All parties will have to view themselves as partners in the Northwest Corridor, and work together to reduce the various fees and tax burden on the facility.

14.5 Full Utilization of Prince Rupert Grain

Full utilization of the Prince Rupert Grain facility is the most pressing concern for Prince Rupert. It is a regional economic development issue which touches on many lives in this northern region. In a more commercial system which moves away from a strictly mileage based rate, there will be flexibility to reduce the rail rate and to negotiate deals which take account of the many efficiencies which Prince Rupert Grain has to offer. Incentives can be offered, and have been offered in the past. If Prince Rupert's logistical advantages are reflected in marketing under a more commercial system Prince Rupert Grain could achieve a significantly higher level of utilization.

14.6 Northwest Corridor Development Corporation

The Task Force met with representatives from the Northwest Corridor Development Corporation, to discuss the challenges, issues and opportunities facing Prince Rupert. The Northwest Corridor Corporation was formed as a result of the Northwest Transportation Corridor Task Force, appointed by the federal Minister of Transport on April 4, 1996 to examine the competitive and future financial viability of the northwest corridor, which is anchored by Prince Rupert. A final report was released March 24, 1997, containing 78 recommendations, including the establishment of the Northwest Corridor Development Corporation. Over 45 organizations expressed an interest in becoming members of the new Corporation.

Beyond the commitment from the provincial governments and the federal government, membership is equally divided between private sector industrial participants and those representing either municipal or economic development organizations. The purpose of the Northwest Corridor Development Corporation is to:

- Pursue a unified strategy that realizes the potential of the northwest corridor.
- Continually improve the international competitiveness of shipping and transportation of goods and persons through the Northwest Corridor in order to retain existing business and attract new customers.
- Raise awareness among the general public and stakeholders to the Corridor and its contribution to the local, provincial and national economies.

The Ports Task Force notes that Transport Canada is a resource member of the Northwest Corridor Development Corporation. The Task Force recognizes the excellent work carried out to date by the Northwest Corridor Development Corporation. This public/private partnership should be encouraged and supported by all stakeholders to continue to promote the Northwest Corridor. By bringing various stakeholders together to discuss corridor promotion and to find solutions to challenges, the Northwest Corridor Development Corporation can be a significant force for positive change in the northern region. Transport Canada will continue to play a positive role in assisting the Corporation in development and promotion of the Northwest Corridor.

15. Churchill

15.1 Consistent Supply of Grain

Maintaining a consistent supply of grain is widely seen as the most important factor in ensuring the future of the Port and Town of Churchill. Although advocates of the port argue that it is a significantly cheaper route to Atlantic destinations than other options, shippers have not provided the port with significant volumes.

Reforms proposed in the Stakeholders' Report of the Kroeger Process can now enable Canadian Wheat Board and non-Board marketers, working with customers, to continue to determine port of exit. While direction of export will still be determined to a large degree by markets, a strong marketing role for the Canadian Wheat Board should ensure it can continue to facilitate shipments through ports such as Churchill. Non-Canadian Wheat Board shippers are encouraged to utilize the capacity of the Port.

15.2 Uncertainty

From the Port operator's and the Town's perspective, the major impediment to Churchill's success has been the uncertainty hanging over the future of the Port and rail line. Hudson Bay Port Corporation believes that the shipping season can be lengthened to five or six months. With assurances that the system will be there, they believe, investment will continue.

Considering the recent transfer of the line and Port operations to a private operator, the government should not now undertake changes which would unduly threaten the investment which the new operator has made in the rail and port infrastructure. It would not be realistic for an entire northern region to be totally at the mercy of market cycles. On the other hand, over the medium term, markets should determine the optimal level of capacity offered.

The Task Force commends OmniTRAX, the Hudson Bay Port Corporation and the Hudson Bay Railway for their marketing efforts to develop new and expanded business for the Port, and encourages the operator to continue and intensify these efforts, including non-agriculture exports and two-way trade. It is through increased sales and volumes, diversification and cost competitiveness that the Port of Churchill can develop a secure future.

All stakeholders must work together to ensure that no impediments exist to the use of Churchill where appropriate, including the availability of marine services. As a first step, Transport Canada has supported the port operator's application to the international insurance industry to have insurance premiums relaxed for Churchill shipments.

15.3 Marine Insurance

The federal government will continue to assist OmniTRAX in its efforts to encourage the international insurance industry to ease the insurance restrictions and surcharges placed on shipments in and out of Churchill.

15.4 Commercial Relationships

Noting the complexities of the grain handling and transportation system, and the integrated role that the new port and rail line operator plays, the Ports Task Force encourages OmniTRAX to further strengthen its commercial relationships in the various fora in which the industry operates, such as the Western Grain Elevators Association, the Car Allocation Policy Group and the Railway Association of Canada. Strong commercial relationships will be increasingly important for niche market players and ports such as Churchill.

15.5 Corridor/Gateway Organization

In the context of corridors and gateways, discussed in this report and achieved in a very successful manner elsewhere, the promotion of a Gateway Council/Corridor group to promote the development and utilization of the northern route is a positive proposal for Churchill. Such a council, led by industry with participation of the stakeholder communities, industrial interests such as the mining industry, and government, would be in a position to act on and enhance Port prospects.

Particularly in light of the fact that it is Port image that stakeholders feel is now holding it back, Churchill would benefit from a proactive gateway council which could play an important role in changing the industry perceptions of Churchill.

ANNEX 1: TERMS OF REFERENCE

BACKGROUND

In December 1997, the Honourable David Collenette, Minister of Transport asked the Honourable Justice Willard Z. Estey to conduct a comprehensive review of the efficiency of the transportation and handling system for Prairie grain. In his Phase I report of May 29, 1998, Justice Estey identified 15 issue areas raised by stakeholders after extensive consultations. In his Phase II report of December 21, 1998, Justice Estey submitted his final recommendations. In relation to ports and waterways, the Estey Review said:

"It is readily apparent that an extensive and serious program must be launched some day to find the solution to the problems surrounding the operation of the Port of Prince Rupert. The Port of Vancouver has serious burdens from sheer volume which impinge upon its capacity at peak periods. An alternative facility on our west coast, even for crisis and backup purposes alone, requires some broad and comprehensive studies and negotiations between all of the parties concerned. It would appear to be a matter of strategic security to be aware that a significant portion of the Western Canadian grain harvest may find its way to Pacific facilities in the United States if Canada should fail to employ all its export facilities efficiently and on an economic basis.

Having examined the plans for the Port of Churchill, all considerations indicate to this Review that national policy and planning should be based upon a recognition that this project appears to have a reasonable chance of commercial success. The Board has done all that it can do in its role in grain exporting to encourage the use of this facility.

It is recommended that the federal government, in conjunction with the Seaway authority, work to encourage the utilization of the Seaway by two-way freight traffic into the North and South Atlantic region and the central regions of Canada and the United States. It is further recommended that the Board continue to make every effort to promote sales of Board grains to markets which can be economically served by the Seaway."

The Minister has written to stakeholders at the ports of Thunder Bay, Churchill, Prince Rupert and Vancouver, informing them that he has asked the Deputy Minister to undertake a review of port priorities, in accordance with Justice Willard Estey's report, and to establish a special Transport Canada Ports Task Force that would study matters of strategic importance to the four ports.

PORTS TASK FORCE OBJECTIVE

The mandate of the Ports Task Force is to work with key port stakeholders in a consultative process to address the issues raised by the Estey Review regarding matters of strategic importance to the ports of Churchill, Prince Rupert, Vancouver and Thunder Bay, and to other stakeholders with marine interests which are affected by the transportation and handling of Western grain. Issues regarding maintenance of competitive Canadian options for shippers as well as the continuity of supply of grain to these ports will also be reviewed.

In order to accomplish its objective, the Ports Task Force is conducting a series of meetings with key port stakeholders and seeking their written views in order to assess their perceptions regarding the key strengths of each port and region as well as the challenges facing them.

Transport Canada will work with system stakeholders to identify key challenges and issues. This is in keeping with the objectives of the *Canada Marine Act* which calls for stronger local and business involvement in port decision-making.

SCOPE

The Ports Task Force will focus on key elements of the Canadian ports' grain handling operations system. The Ports Task Force may also examine cross-border competition with US port options.

In addition to seeking the views and participation of stakeholders, the Ports Task Force may obtain expert advice regarding the service readiness and conditions of fair competition for these Canadian ports that can provide service options and choices for export grain. These activities could include an examination of market information, comparative port efficiency, emerging trends in these markets and sectors and level-playing field and market considerations.

PROCESS

The Ports Task Force is consulting local interests and users, to ensure that both opportunities and obstacles are identified.

An effort will be made to regroup the various interests that could work together in promoting the ports. Practical solutions are needed to ensure that the ports can offer efficient terminal operations, improved access to the port, adequate availability of transportation equipment, cargo handling, marine insurance and other necessary services.

The focus is on cost-effective measures that will improve the efficiency, accountability and performance of the system, including matters related to stability of grain supply. Some issues may require further in-depth examination, possibly including special assistance from stakeholders or external consultants.

LINKAGES WITH THE KROEGER PROCESS

This Task Force will run parallel with and be complementary to the work of Mr. Arthur Kroeger, whose objective is seeking consensus among system participants on how a more commercially oriented grain handling and transportation system would work. There is, of course, the likelihood that some of the issues examined by the Task Force will overlap with some of the issues Mr. Kroeger is reviewing, especially as they relate to rail linkages at ports. Mr. Kroeger will receive regular progress reports from the Ports Task Force so that relevant information can be considered by him. Mr. Kroeger, for his part, will ensure that the Ports Task Force is kept fully informed on a regular basis of the work that is being carried out through his process.

DEPARTMENTAL REPRESENTATIVES

The Ports Task Force is headed by the Deputy Minister of Transport, Margaret Bloodworth. The departmental representatives for contact purposes are:

- André Pageot, Director General, Marine Policy and Programs, (613) 998-1843
- Kristine Burr, Director General, Surface Transportation Policy, (613) 998-2690

ANNEX 2: PORT PROFILES

Port Profile: Vancouver

Licensed Grain Terminals	5 - Cascadia, Pacific, Richardson, SWP and UGG
Bulk Handling Facilities	2 – Neptune Terminal, Vancouver Wharves
Railways	4 - CN, CP, BCR and BN
Licensed Storage Capacity	929 290 tonnes
Working Capacity	560 000 tonnes
Number of vessels cleared 97/98	506
Average size of vessels	22 200 tonnes
Average number of berths/vessel	2.3
Total tonnage shipped 97/98	11.22 mmt
Grain handler's wage (mid-range)	$26.50 per hour
Municipal taxation per terminal	$1.2 million (average for 5 terminals)
Lease rate paid to Port Authority	To be determined
Terminal elevation tariff (wheat)	$7.00 per tonne
Pilotage per vessel	$12,400.00 (includes shifting berths)
Grain as proportion of Port volume	20 %
Spot shipping rate (July '99)	
- Atlantic destinations	US$14-17.00/tonne (60-70 000 tonne vessel) US$24-25.50/tonne (20-30 000 tonne vessel)
- Pacific destinations	US$10-14.00/tonne (60-70 000 tonne vessel) US$22.00/tonne (35-45 000 tonne vessel)

Port Profile: Thunder Bay

Licensed Grain Terminals	7 - Agricore, Cargill, Richardson, P&H, SWP and UGG (2)
Bulk Handling Facilities	2 - TB Terminals Ltd. and Valley Camp
Railways	2 - CN and CP
Lake Vessel Operators	4 - Seaway Bulk Carriers, N.M. Paterson & Sons, Parrish & Heimbecker& Groupe Desgagnés
Number of lakers	33 - SBC – 21, Paterson – 7, P&H – 2, GD - 3
Licensed Storage Capacity	1 278 540 tonnes
Working Capacity	700 000 tonnes
Number of vessels cleared 97/98	379
Average size of vessels	21 000 tonnes
Average number of berths/vessel	3 (estimate from Canadian Ports Clearance Association)
Total tonnage shipped 97/98	7.98 mmt
Grain handler's wage (mid-range)	$22.00 per hour
Municipal taxation per termina	$950,000.00 (average for 7 terminals)
Lease rate paid to Port Authority	$0.08 per tonne
Terminal elevation tariff (wheat)	$6.70 per tonne
Pilotage per vessel	$5,300.00 per laker (St. Lawrence only) $20,000.00 per saltie (approximate)
Grain as proportion of Port volume	70 - 75 %
Spot shipping rate (July '99)	US$21-22.00 per tonne (US$14-15 St. Lawrence + US$7 TB spread, based on 20-30 000 tonne vessel)

Port Profile: Prince Rupert

Licensed Grain Terminal	1 - Prince Rupert Grain Ltd.
Bulk Handling Facility	1 – Fairview Agport
Railway	1 - CN
Licensed Storage Capacity	209 510 tonnes
Working Capacity	140 000 tonnes
Number of vessels cleared 97/98	122
Average size of vessels	34 250 tonnes
Number of berths/vessel	1
Total tonnage shipped 97/98	4.18 mmt
Grain handler's ...ge (mid-range)	$26.50 per hour
Municipal taxation	$3 million
Lease rate paid to Port Authority	$0.40 per tonne
Terminal elevation tariff (wheat)	$6.78 per tonne
Pilotage per vessel	$8,000
Grain as proportion of Port volume	35 %
Spot shipping rate (July '99)	
- Atlantic destinations	US$14-17.00/tonne (60-70 000 tonne vessel) US$24-25.50/tonne (20-30 000 tonne vessel)
- Pacific destinations	US$10-14.00/tonne (60-70 000 tonne vessel) US$22.00/tonne (35-45 000 tonne vessel)

Port Profile: Churchill

Licensed Grain Terminal	1 - Hudson Bay Port Company
Railway	1 - Hudson Bay Railway
Licensed Storage Capacity	140 020 tonnes
Working Capacity	110 000 tonnes
Number of vessels cleared 1998*	11
Average size of vessels	28 900 tonnes
Number of berths/vessel	1
Total tonnage shipped 1998*	318 000 tonnes
Grain handler's wage (mid-range)	$14.00 + northern benefit = $18.50 per hour
Municipal taxation	$400,000.00 per annum
Terminal elevation tariff (wheat)	$6.47 per tonne
Pilotage per vessel	$2,000.00 (approximate)
Grain as proportion of Port volume	90 %
Spot shipping rate (July '99)	US$19-20.00 per tonne (US$14-15 St. Lawrence + US$5 Churchill spread, based on 20-30 000 tonne vessel)

**Statistics maintained by shipping season.*